

PROGRAM DOCUMENTATION

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CHANGE RECORD

Revision	Date	Pages Affected
A	2/80	Initial Release

## FOREWORD

This document provides detailed information about Version 1, Revision B of the PCC 2000 Accounts Payable Software. It is an aid to program modification, and though it was written for the PCC 2000 software, most of it applies to Version 2, Revision C of the MITS 300 Accounts Payable System.

This document is divided into four sections:

Section 1, SYSTEM OVERVIEW, describes the system data flow, file structures, and general program structure. It is divided into four parts:

- System Flowchart
- File Structures
- General Program Map
- Common Subroutines

Section 2, DATA RECORD DESCRIPTIONS, describes the record structure of the data files. The files are listed in order of importance. There is one part for each file divided into:

- Record Layout
- Field Explanations

Section 3, INDIVIDUAL PROGRAM STRUCTURE, describes the programs that are uniquely defined in the Accounts Payable system. The programs are listed alphabetically. The documentation for each program consists of three parts:

- Data Files
- Functional Description
- Code Breakdown

Section 4, PROGRAM VARIABLES, lists the variables used in the programs.

- Variable Definitions
- Variable Cross Reference

This document is used in conjunction with the PCC 2000 Accounts Payable Software User's Manual (document number 248101).

Programming terms in this document are defined in C. J. Sippl's Data Communication Dictionary, copyright 1976, and do not connote interpretations outside the computer industry.

INDEX

This document provides detailed information on the various features of the IBM 2300 Accounting System. It is intended to provide a general overview of the system and its capabilities. The information is organized into sections, each covering a different aspect of the system.

This document is divided into the following sections:

Section 1, SYSTEM OVERVIEW, describes the system and its components. It is divided into the following sections:

- System Overview
- System Architecture
- General Features
- Common Subroutines

Section 2, DATA RECORDS, describes the format and structure of the data records. It is divided into the following sections:

- Data Records
- Data Fields

Section 3, PROGRAMS, describes the various programs that are used to process the data records. It is divided into the following sections:

- Data Files
- Functional Programs
- Core Routines

Section 4, REPORTS, describes the format and structure of the reports generated by the system. It is divided into the following sections:

- Variable Reports
- Variable Data Reports

This document is used in conjunction with the IBM 2300 Accounting System. It provides a general overview of the system and its capabilities. The information is organized into sections, each covering a different aspect of the system.

Programming errors in this document are defined in the Appendix. The Appendix is located at the end of the document. The Appendix is organized into sections, each covering a different aspect of the system.



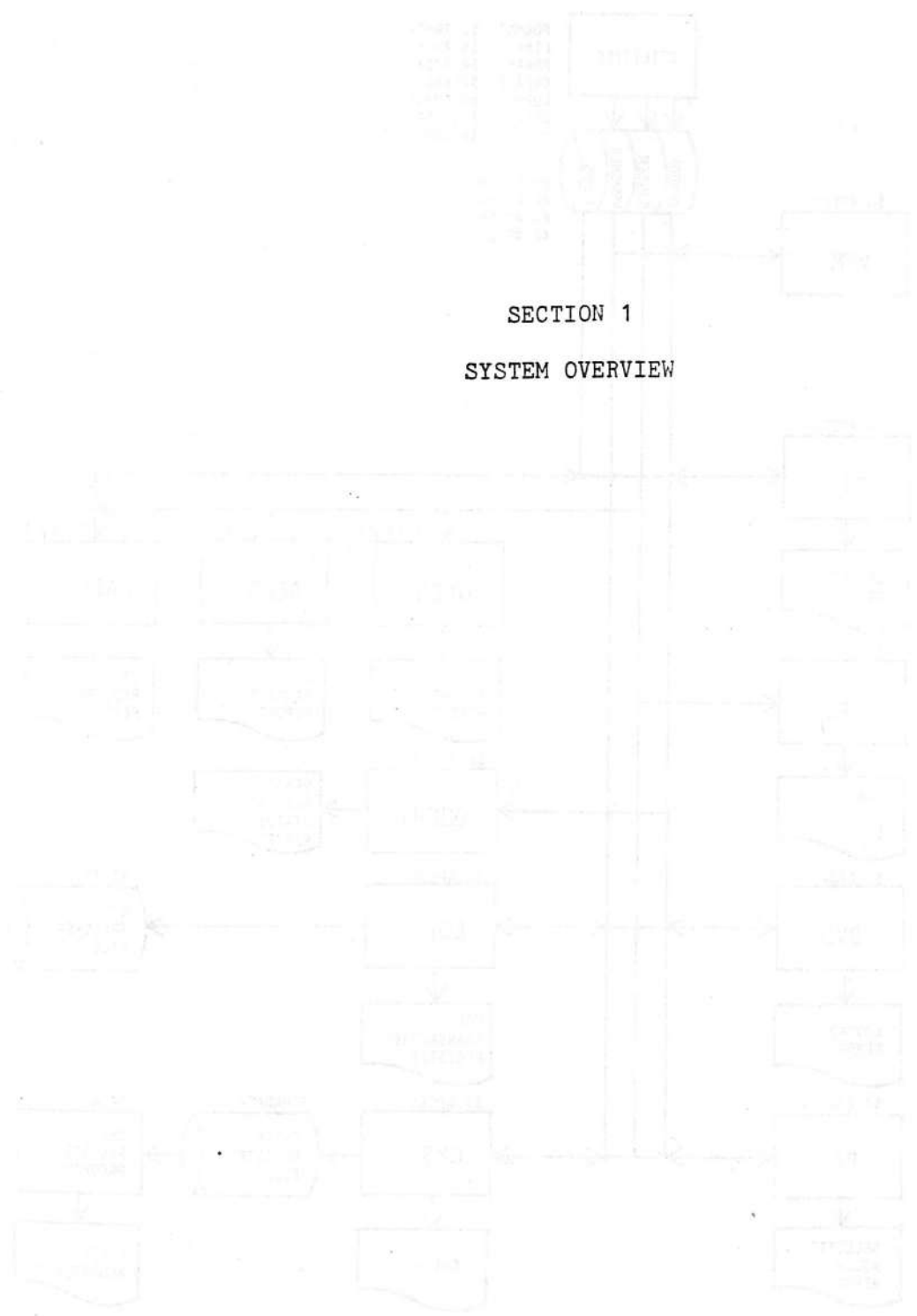
TABLE OF CONTENTS

1	SYSTEM OVERVIEW	
1-1	System Flowchart . . . . .	2
1-2	File Structures . . . . .	3
1-3	General Program Map . . . . .	4
1-4	Common Subroutines . . . . .	7
2	DATA RECORD DESCRIPTIONS	
2	Data Record Descriptions . . . . .	16
2-1	#A.APVEN - Vendor File . . . . .	17
2-2	#A.APVOC - Voucher File . . . . .	20
2-3	#A.APGLT - G/L Transfer File . . . . .	25
2-4	#A.APSYS - System Parameter File . . . . .	27
2-5	#A.APLNK - System Linkage File . . . . .	30
2-6	#A.APHLP - Help File . . . . .	32
2-7	#CHKDATA - Check Register File . . . . .	32
2-8	#APTEMP# - Temporary File for the \$A.APETV Program . . . . .	32
2-9	<<TEMP>> - Temporary File for the \$A.APCAS Program . . . . .	32
2-10	>>TEMP<< - Temporary File for the \$A.APCAS Program . . . . .	32
2-11	SORT - Temporary File for the \$A.APCAS Program . . . . .	32
2-12	TESTVEN - Original Vendor Test Data File . . . . .	33
2-13	TESTVOC - Original Voucher Test Data File . . . . .	33
3	INDIVIDUAL PROGRAM STRUCTURE	
3-1	\$A.APAGE - Aged Payables Program . . . . .	36
3-2	\$A.APCAS - Cash Requirements Program . . . . .	37
3-3	\$A.APCKR - Check Register Program . . . . .	40
3-4	\$A.APCKS - Print Payables Checks Program . . . . .	41
3-5	\$A.APCRE - File Creation Program . . . . .	43
3-6	\$A.APDVO - Delete Vouchers Program . . . . .	44
3-7	\$A.APEOP - End-of-Period Program . . . . .	46
3-8	\$A.APETV - Enter Vouchers Program . . . . .	48
3-9	\$A.APLNK - Linkage File Maintenance Program . . . . .	50
3-10	\$A.APOPE - List Open Vouchers Program . . . . .	51
3-11	\$A.APPAY - Determine What is to be Paid Program . . . . .	53
3-12	\$A.APQUE - Query Vendor Program . . . . .	55
3-13	\$A.APSYS - System Parameter File Maintenance Program . . . . .	57
3-14	\$A.APVFL - Vendor File List Program . . . . .	58
3-15	\$A.APVFM - Vendor File Maintenance Program . . . . .	59
3-16	AP MENU - Menu Program . . . . .	61
4	PROGRAM VARIABLES	
4	Program Variables . . . . .	64
4-1	\$A.APAGE - Aged Payables Program . . . . .	64

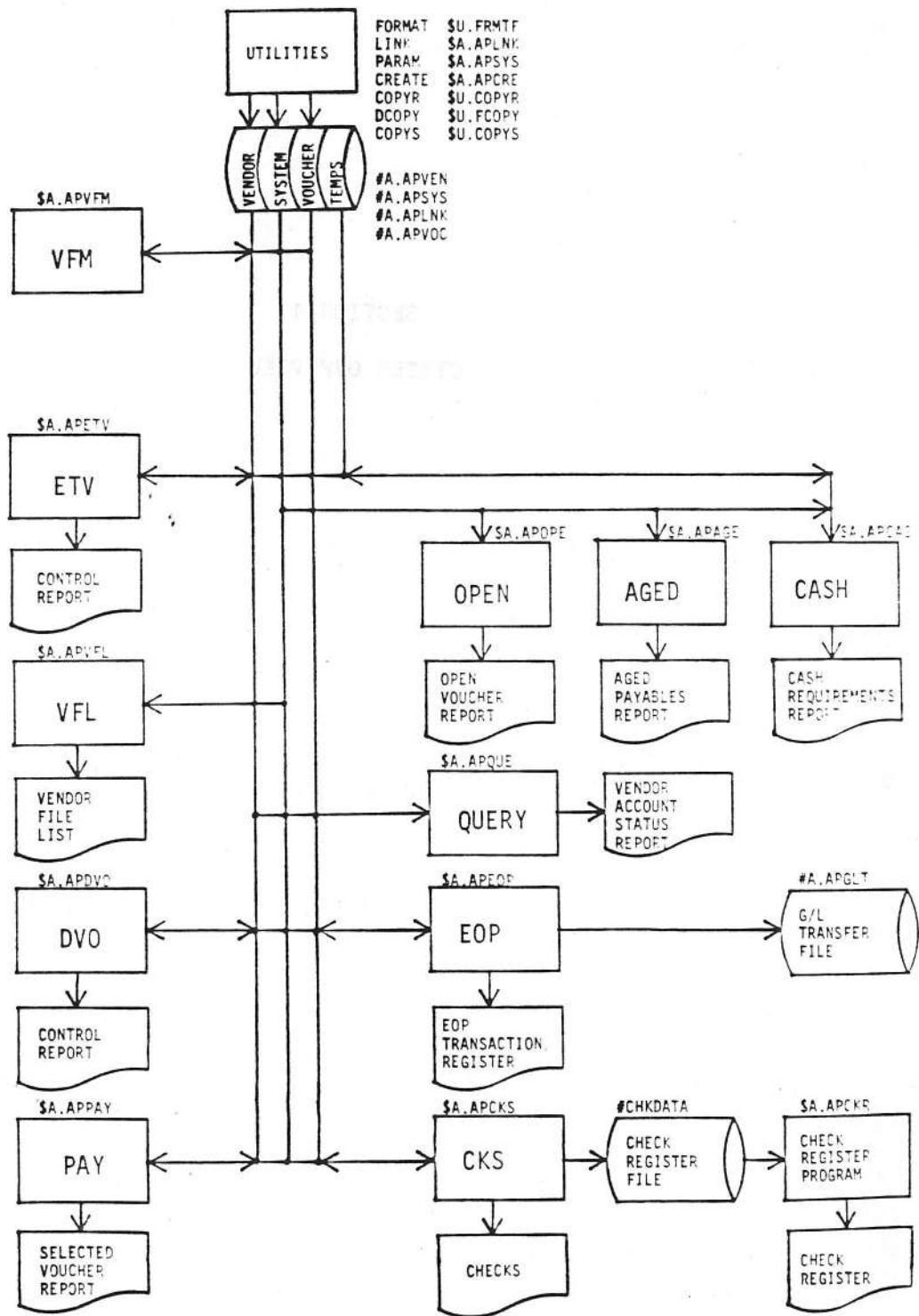
TABLE OF CONTENTS (continued)

4-2	\$A.APCAS - Cash Requirements Program . . . . .	67
4-3	\$A.APCKR - Check Register Program . . . . .	71
4-4	\$A.APCKS - Print Payables Checks Program . . . . .	74
4-5	\$A.APCRE - File Creation Program . . . . .	80
4-6	\$A.APDVO - Delete Vouchers Program . . . . .	82
4-7	\$A.APEOP - End-of-Period Program . . . . .	85
4-8	\$A.APETV - Enter Vouchers Program . . . . .	89
4-9	\$A.APLNK - Linkage File Maintenance Program . . . . .	94
4-10	\$A.APOPE - List Open Vouchers Program . . . . .	97
4-11	\$A.APPAY - Determine What is to be Paid Program . . . . .	100
4-12	\$A.APQUE - Query Vendor Program . . . . .	105
4-13	\$A.APSYS - System Parameter File Maintenance Program . . . . .	108
4-14	\$A.APVFL - Vendor File List Program . . . . .	111
4-15	\$A.APVFM - Vendor File Maintenance Program . . . . .	114
4-16	AP MENU - Menu Program . . . . .	117
4-17	Common Subroutines . . . . .	120
APPENDIX	Floppy Disk to Hard Disk Conversion . . . . .	A-1

SECTION 1  
SYSTEM OVERVIEW



SYSTEM FLOWCHART



1-2 FILE STRUCTURES

The Accounts Payable System Software creates and maintains two primary data files, the Vendor File and the Voucher File. A third file, the General Ledger Transfer File is optional.

- The Vendor File contains addresses, totals, and vendor status information.
- The Voucher File contains information about each invoice sent by a vendor.
- The General Ledger Transfer File contains summary records of Payable transactions to be transferred to the General Ledger.

Physically, each data file record requires one sector of disk storage and about 12% overhead for the ISAM key records.

In addition to the three data files, there are three system files and several temporary files.

- The System Parameter File contains information about the particular release and the installation of the Accounts Payable Software.
- The System Linkage File links the programs to the main data disk and stores the system date.
- The Help Message File contains information about the operator prompts.
- The temporary files store information for entering data, disk sorting, and report generating.

1-3 GENERAL PROGRAM MAP

The following line numbers and descriptions apply to all Accounts Payable Applications Programs:

Line Numbers	Functional Description
00000-00000	Program File Name, Title, Revision Date, and Programmer's Initials
00001-00001	SET "CTL OFF" ' Disable keyboard control characters, : CLEAR 5000 ' assign string space, and : DP% = 0 ' assign the program drive number.
00002-00002	N1\$ = "#A.APLNK" : N2\$ = "#A.APSYS" : N3\$ = "\$A.APLNK" : N4\$ = "\$A.APSYS" ' Assign the system program names : N5\$ = "#A.APHLP" ' and the system data file names.
00003-00003	PN\$ = "Program Name"
00004-00004	GOSUB 50000 ' Call the program set up subroutine.
00005-00005	N6\$ = "#A.APVEN" : N7\$ = "#A.APVOC" : N8\$ = "#CHKDATA" : N9\$ = "#A.APGLT" ' Assign the data file names.
00006-19899	Program Body
19900-19999	Close all files, end the program, and run the menu.
20000-45000	Program Subroutines
46000-46120	Retrieve the vendor or voucher record.
46020	FI% equals 1, retrieve the vendor record.
46070	FI% equals 2, retrieve the voucher record.
46110-46120	Unpack the G/L Account/Amount pairs from the voucher.
46500-46500	Retrieve the succeeding vendor or voucher record.
47000-47000	Create the vendor or voucher record.
47500-47620	Restore the vendor or voucher record.
47510	FI% equals 1, restore the vendor record.
47570	FI% equals 2, restore the voucher record.
47610-47620	Pack the G/L Account/Amount pairs into the voucher.
48000-48000	Set up the Vendor and Voucher Files.

## GENERAL PROGRAM MAP (continued)

Line Numbers	Functional Description
48050-48050	Rewind the Vendor or Voucher File.
48100-48499	Open the Vendor and Voucher Files.
48100	FI% equals 1, open the Vendor File.
48110	FI% equals 2, open the Voucher File.
48500-48560	Field variables for the vendor and voucher records.
48510	Field variables for the vendor record.
48530	Field variables for the voucher record.
48540-48550	Field variables for the G/L Account/Amount pairs.
49000-49499	Close the Vendor and Voucher Files.
49500-49500	Delete the vendor or voucher record.
50000-50899	Set up constants, error trapping, functions, screen heading, and system files.
50160	FN DI\$(D#) - Function to pack a dollar amount
50165	FN ID\$(I\$) - Function to unpack a dollar amount
50170	FN SD!(S\$) - Function to pack a date
50175	FN DS\$(D!) - Function to unpack a date
50900-50910	Heading Subroutine
51000-51099	Input an alphanumeric string (Subroutine Query).
51200-51300	Input a number (Subroutine Querynumber).
51400-51450	Input a date (Subroutine Querydate).
51600-51710	Input a dollar amount (Subroutine Querydollar).
51800-51810	Input a yes or no (Subroutine Queryyesno).
54000-54000	INVALID ENTRY Subroutine
54050-54050	SEVERE SYSTEM ERROR Test
54100-54110	SEVERE SYSTEM ERROR Subroutine
54200-54200	NUMBER OUT OF RANGE Subroutine
54300-54300	INCORRECT DATE Subroutine
54500-54700	Error Trap Subroutine
59000-59250	Help File Subroutine

1-3 GENERAL PROGRAM MAP (continued)

Line Numbers	Functional Description
ISAM	ISAM-TWO ' ISAM062878RB
60000-60310	ISAM create file
60200-60200	ISAM read/set the file Comment/Parameter Area
60500-60850	ISAM file set up
61000-61200	ISAM file open
61200-61200	ISAM file rewind
61500-61620	ISAM file close
62000-62190	ISAM create record
62500-62900	ISAM delete record
63000-63200	ISAM retrieve record
63500-63500	ISAM restore record
64000-64130	ISAM retrieve succeeding record
64500-65400	ISAM retrieve preceding record
65515-65515	SAVE "program name": END
65520-65520	SET the PRINT output command to the printer.
65525-65525	SET the PRINT output command to the CRT.
65528-65528	Subroutine to set the logical page size equal to the physical page size
65529-65529	Top-of-Forms Subroutine



## 1-4 COMMON SUBROUTINES

The subroutines common to the Accounts Payable System and all PCC accounting programs are described below.

### 1-4-1 Common Subroutines for the Accounts Payable Programs

The following subroutines are similar or identical in all Accounts Payable Applications Programs. The subroutines and their variations are described below:

#### 00000-00006 Program set up and initialization

This section identifies the program, assigns data file names to variables, disables keyboard characters, and calls the Program Set Up Subroutine. The revision date in line 0 identifies the program for maintenance purposes. Anyone modifying the program should add a new revision date at the end of the list. The keyboard control characters are disabled to prevent programs from being interrupted before the ISAM files are properly closed.

#### 18100 Voucher Key Unpacking Subroutine

This subroutine takes a voucher code stored in B\$(0) and converts it to a printable form stored in KO\$.

#### 46000 Retrieve the vendor or voucher record.

A call to this subroutine with FI% = 1 retrieves vendor KE\$. A call with FI% = 2 retrieves voucher KE\$.

#### 46110 Unpack the G/L Account/Amount Pairs from the voucher.

Programs not using the G/L Account/Amount pairs have this subroutine simplified to avoid unpacking these fields.

#### 46500 Retrieve the succeeding vendor or voucher record.

This subroutine retrieves the key succeeding the last key retrieved or stored.

1-4-1 Common Routines for the Accounts Payable Programs (continued)

47000 Create the vendor or voucher record.

A call to this subroutine with FI% = 1 creates vendor record KE\$. A call with FI% = 2 creates voucher record KE\$. The create subroutine destroys ISAM positioning. A call to retrieve a succeeding or preceding record, made after creating a record, returns a random record.

47610 Pack the G/L Account/Amount pairs into the voucher.

Programs not using the G/L Account/Amount pairs have this subroutine simplified to avoid packing these fields.

47500 Restore the vendor or voucher record.

The restore function modifies an existing record. A call with FI%=1 restores a vendor record and a call with FI% = 2 restores a voucher record.

48000 Set up the Vendor and Voucher Files.

The set up function must be performed after the files are opened. NF% is the maximum number of files that can be concurrently open. NB% is the number of virtual I/O buffers used.  $NB\% = 8 + NF\% * 5$  is the optimum number of I/O buffers.

48050 Rewind the Vendor or Voucher File.

The rewind function repositions the ISAM file index pointers to the beginning of the file

48100 Open the Vendor and Voucher Files.

This subroutine opens the Vendor and the Voucher file. The File Open Flag FO% is set to TRUE.

48500 Field variables for the vendor and voucher records.

This subroutine defines the data fields for the vendor and voucher records. Programs not using the G/L Account/Amount pairs are simplified and do not distinctly define these fields.

1-4-1 Common Subroutines for the Accounts Payable Programs (continued)

48540 Field variables for the G/L Account/Amount pairs.

Programs not using the G/L Account/Amount pairs have this subroutine simplified to avoid defining fields for these variables.

49000 Close the Vendor and Voucher Files.

This subroutine closes the Vendor File and then the Voucher File. Before a close is attempted on the Vendor File, the File Open Flag FO% is set to FALSE.

A serious error condition in the program normally closes the files; however if an error occurs while closing the Vendor File, the Voucher File is not closed. The File Open Flag FO% prevents an infinite file close attempt loop after an error is encountered closing the Vendor File.

49500 Delete the vendor or voucher record.

A call to this subroutine with FI% = 1 deletes vendor record KE\$. A call with FI% = 2 deletes voucher record KE\$.

65515 Maintenance Program SAVE Line

This line is for program maintenance and is not encountered during the programs operation. A GOTO 65515 entered in the direct mode saves the program and eliminates the possibility of entering the program name incorrectly.

## 1-4-2 Common Subroutines for All Accounting Systems

The following subroutines are similar or identical in all Accounting Programs. The subroutines and their variations are described below:

### 19900 Program End Subroutine

This subroutine closes ISAM and any other open files, resets the PRINT Command to the CRT, displays END OF "program name", prompts for RETURN TO THE SYSTEM MENU, resets error control back to BASIC, and runs the menu program.

### 50000 Program Set Up Subroutine

This subroutine opens and reads the run-time parameters from the system and linkage files; sets the run-time constants and internal error trap; prints the screen heading; initializes the functions; and opens the Help File.

### 50160 FN DI\$(D#)- Function to pack a dollar amount

This function converts a double precision amount in dollars to a four character integer string in cents.

The integer range is  $-2^{31}$  to  $2^{31} - 1$  cents. The largest representable dollar amount is \$21, 474, 836.47.

### 50165 FN ID\$(I\$) - Function to unpack a dollar amount

This function converts a packed four character integer string in cents to a double precision amount in dollars.

### 51070 FN SD!(S\$) - Function to pack a date

This function converts an eight character date string in the form MM/DD/YY to a single precision number with the decimal representation YYMMDD.

### 50175 FN DS\$(D!) - Function to unpack a date

This function converts a single precision packed date with the decimal representation YYMMDD into a string with the eight character representation MM/DD/YY.

50900 Heading Subroutine

If LP is true, the heading is printed on the printer; else, the screen is cleared and the heading is printed on the it.

51000 Subroutine Query(Q\$, Q, QL, QS, QT, R\$, RL, RL\$) - Input an alphanumeric string

Q\$ - Query prompt message  
Q - Help File message number  
QL - Query Field size  
QS - End Query print line flag  
QT - Number of tabs printed before the Q\$ message  
R\$ - User response returned by this subroutine  
RL - Length of user response  
RL\$- Leftmost character of the response

This subroutine is the basic input routine. It prints Q\$ after QT spaces and then waits for a response. Double quotes are not allowed in an input string. Entering a question mark causes the Help message to be displayed. All other responses are returned in R\$. RL is the length of the response and RL\$ is the leftmost character.

Variations of this subroutine use QS to determine whether to end the print line and others print "? " after Q\$.

51200 Subroutine Querynumber(Q\$, Q, QT, UB!, LB!, N!) - Input a number

Parameters Q\$, Q, and QT are described in Subroutine Query.  
UB! - Upper bound for N!  
LB! - Lower bound for N!  
N! - Value returned by this subroutine in the range LB!<=N!<=UB!

This subroutine prompts the user for a number with Query and validates the returned string R\$. A valid entry is a null, in which case N!= 0. Another valid entry is blanks followed by an optional "+" or "-" and one or more digits with an optional ".". If R\$ is valid, and not >= LB! or <= UB!, "OUT OF RANGE" is printed and a new R\$ is requested. If LB! equals UB!, R\$ is not range checked.

1-4-2 Common Subroutines for All Accounting Programs (continued)

51400 Subroutine Querydate(Q\$, Q, QT, R\$, MO, DA, YR) - Input a date.

Parameters Q\$, Q, QT, and R\$ are described in Subroutine Query.  
MO - Month entered  
DA - Day entered  
YR - Year entered

This subroutine prompts the user for a date with Query and validates the returned string R\$. A valid date is a null, in which case MO=DA=YR=0, or R\$ is in the form MM/DD/YY where 1<=MM<=12, 1<=DD<=31, and 9<=YY<=99. R\$ contains the date string from which MO, DA, and YR were derived.

51600 Subroutine Querydollar(Q\$, Q, QT, R\$, D#) - Input dollar amount.

Parameters Q\$, Q, QT, and R\$ are described in Subroutine Query.  
D# - Dollar value entered

This subroutine prompts the user for a dollar value with Query and validates the returned string R\$. A valid value is a null, in which case D# = 0; or R\$ is a valid number (see Querynumber), or a number preceded by a "\$". Commas are ignored. R\$ contains the dollar amount string from which D# was derived.

51800 Subroutine Queryyesno(Q\$, Q, QT, YES)- Input a yes or a no.

Parameters Q\$, Q, and QT are described in Subroutine Query.  
YES - Set TRUE (-1) if the response is Y  
- Set FALSE (0) if the response is N

This subroutine prompts the user for "(Y OR N)?" with Query. If the first character of the response is not Y or N, the prompt is repeated.

54000 - 54700 Error messages and error trapping

This section contains the system error messages, ISAM Error Check Subroutine, and the ABNORMAL END OF JOB Subroutine.

1-4-2 Common Subroutines for All Accounting Systems (continued)

59000 Help File Subroutine

This subroutine does a binary search on the Help File directory and displays message number Q. It is called when a "?" is responded to query. Q is a Query routine parameter. Refer to Section 2-6 for an explanation of the Help File's structure and purpose.

60000-65400 ISAM - TWO

See MITIS ISAM Software (PCC 2000) Version, Document Number 248107.

65520-65525 PRINT Command Output Device Switching Subroutines

These two subroutines allow all printing to be done with the PRINT command and allow the option of displaying a report on the CRT or printing it.

65528 Set the logical page size equal to the physical page size.

The logical page size is set equal to the physical page size to prevent the BASIC print driver from paging. All paging is done under program control.

65529 Top-of-Forms Subroutine

This subroutine advances to the next page by printing blank lines and then resets the line count variable LC to zero.

General Subroutine for All Accounting System Functions

Subroutine for All Accounting System Functions

This subroutine will search for the first blank space in the message and return the position of the blank space. It is a very simple routine and is used in many other subroutines.

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The first blank space in the message is found and the position is returned.

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DATA RECORD DESCRIPTIONS

There are 13 data files in the database. The files are listed in the following table. The file names are in all caps. The file descriptions are in the following table.

The file names and their descriptions are listed in the following table.

File Name	Description
DATA	...
INDEX	...
...	...

SECTION 2

DATA RECORD DESCRIPTIONS

## DATA RECORD DESCRIPTIONS

There are 13 data files in the Accounts Payable System: two Primary Data Files #A.APVEN and #A.APVOC; a G/L Transfer File #A.APGLT; three System Files #A.APHLP, #A.APLNK, and #A.APSYS; a Check Register Data File #CHKDATA; four Temporary Files #APTEMP#, <<TEMP>>, >>TEMP<<, and SORT; and two Test Data Files TESTVEN and TESTVOC.

Layouts and field explanations of these files are detailed in the following paragraphs:

Paragraph	File Name	Type	Description
2-1	#A.APVEN	ISAM Random	Vendor File
2-2	#A.APVOC	ISAM Random	Voucher File
2-3	#A.APGLT	Sequential	General Ledger Transfer File
2-4	#A.APSYS	Sequential	System Parameter File
2-5	#A.APLNK	Sequential	System Linkage File
2-6	#A.APHLP	Help Random	System Help File
2-7	#CHKDATA	Sequential	Check Register Data File
2-8	#APTEMP#	Sequential	Temporary File from \$A.APETV
2-9	<<TEMP>>	Sequential	Temporary File from \$A.APCAS
2-10	>>TEMP<<	Sequential	Temporary File from \$A.APCAS
2-11	SORT	Sequential	Temporary File from \$A.APCAS
2-12	TESTVEN	ISAM Random	Original Test Vendor File
2-13	TESTVOC	ISAM Random	Original Test Voucher File

2-1 #A.APVEN - VENDOR FILE

2-1-1 #A.APVEN - Vendor File Layout

The Vendor File is an ISAM random file and has the following layout:

Field Number	Field Description	Field Width	Position From	Position To	Field Name	Program Variable
1	Vendor Code	6	1	6	KY\$(1)	A\$(0)
2	Vendor Name	24	7	30	F1\$(1)	A\$(1)
3	Address 1	24	31	54	F1\$(2)	A\$(2)
4	Address 2	24	55	78	F1\$(3)	A\$(3)
5	Area Code	2	79	80	F1\$(4)	A1\$
6	Phone Number	4	81	84	F1\$(5)	A2\$
7	YTD Purchases	4	85	88	F1\$(6)	A\$(1)
8	YTD Payments	4	89	92	F1\$(7)	A\$(2)
9	Current Balance	4	93	96	F1\$(8)	A\$(3)
10	Last Payment	4	97	100	F1\$(9)	A\$(4)
11	Last Payment Date	4	101	104	F1\$(10)	A\$(5)
12	Monthly Entry	1	105	105	F1\$(11)	A\$(6)
13	Due Day of Month	1	106	106	F1\$(12)	A\$(7)
14	Debit Account #1	5	107	111	F1\$(13)	A\$(8)
15	Debit Amount #1	4	112	115	F1\$(14)	A\$(5)
16	Debit Account #2	5	116	120	F1\$(15)	A\$(9)
17	Debit Amount #2	4	121	124	F1\$(16)	A\$(6)
18	Month Last Paid	1	125	125	F1\$(17)	A\$(10)
19	Highest Voucher No.	1	126	126	F1\$(18)	A\$(11)
20	Reserved	2	127	128	-	-

2-1-2 #A.APVEN - Vendor File Field Explanations

The Vendor File contains vendor names and addresses, accumulated voucher information, and voucher numeration and Automatic Voucher generation information.

Field	Explanation
Field 1 Vendor Code	Five characters identify a vendor. The characters hyphen (-) and double quote (") are not allowed. The Vendor Code is a duplicate of the ISAM key.
Field 2 Vendor Name	The vendor name as it appears on reports and checks
Field 3 Address 1	The vendor's street address and any suite or room number
Field 4 Address 2	City, State, and zip code
Field 5 Area Code	Vendor area code
Field 6 Phone Number	The vendor's telephone number
Field 7 YTD Purchases	Total dollar amount of purchases made from the vendor this year
Field 8 YTD Payments	Total dollar amount of payments made to the vendor this year
Field 9 Current Balance	YTD purchases minus YTD payments made to the vendor
Field 10 Last Payment	Dollar amount of last payment made to the vendor
Field 11 Last Payment Date	Date of last payment made to the vendor
Field 12 Monthly Entry Flag	This flag indicates that an Automatic Voucher is to be generated. Y indicates yes; N indicates no and also that fields 13 to 18 are not in the record.

2-1-2 #A.APVEN - Vendor File Field Explanations (continued)

Field	Explanation
Field 13 Due Day of Month	A number from 1 to 31, indicating the day of the month to pay the vendor, is required if the Monthly Entry Flag is a Y.
Field 14 Debit Account #1	The first account for the G/L distribution of an automatic voucher is required if the Monthly Entry Flag is a Y.
Field 15 Debit Amount #1	A dollar amount to debit the account in Field 16 is required if the Monthly Entry Flag is a Y
Field 16 Debit Account #2	A second account for the G/L distribution of an automatic voucher is optional. Automatic Vouchers allow two distributions only.
Field 17 Debit Amount #2	A dollar amount to debit the account in Field 16 is required if Field 16 has an account number.
Field 18 Month Last Paid	A number from 1 to 12 indicates the month the last Automatic Voucher was generated.
Field 19 Highest Voucher	The last voucher extension used is read and updated when new vouchers are created in the Enter Vouchers Program.
Field 20 Reserved	Reserved for future use

2-2 #A.APVOC - VOUCHER FILE

2-2-1 #A.APVOC - Voucher File Layout

The Voucher File is an ISAM random file and has the following layout:

Field Number	Field Description	Field Width	Position From	Position To	Field Name	Program Variable
1	Voucher Code	6	1	6	KY\$(2)	B\$(0)
2	Voucher Date	4	7	10	F2\$(1)	B\$(1)
3	Amount Due	4	11	14	F2\$(2)	B\$(1)
4	Date Due	4	15	18	F2\$(3)	B\$(2)
5	Discount Percent	2	19	20	F2\$(4)	B\$(3)
6	Discount Amount	4	21	24	F2\$(5)	B\$(2)
7	Discount Date	4	25	28	F2\$(6)	B\$(4)
8	Invoice Number	10	29	38	F2\$(7)	B\$(5)
9	Invoice Date	4	39	42	F2\$(8)	B\$(6)
10	Payment Status	1	43	43	F2\$(9)	B\$(7)
11	G/L Account #1	5	44	48	F2\$(10)	B\$(8)
12	G/L Amount #1	4	49	52	F2\$(11)	B\$(3)
13	G/L Account #2	5	53	57	F2\$(12)	B\$(9)
14	G/L Amount #2	4	58	61	F2\$(13)	B\$(4)
15	G/L Account #3	5	62	66	F2\$(14)	B\$(10)
16	G/L Amount #3	4	67	70	F2\$(15)	B\$(5)
17	G/L Account #4	5	71	75	F2\$(16)	B\$(11)
18	G/L Amount #4	4	76	79	F2\$(17)	B\$(6)
19	G/L Account #5	5	80	84	F2\$(18)	B\$(12)
20	G/L Amount #5	4	85	88	F2\$(19)	B\$(7)
21	G/L Account #6	5	89	93	F2\$(20)	B\$(13)
22	G/L Amount #6	4	94	97	F2\$(21)	B\$(8)
23	G/L Account #7	5	98	102	F2\$(22)	B\$(14)
24	G/L Amount #7	4	103	106	F2\$(23)	B\$(9)
25	G/L Account #8	5	107	111	F2\$(24)	B\$(15)
26	G/L Amount #8	4	112	115	F2\$(25)	B\$(10)
27	G/L Account #9	5	116	120	F2\$(26)	B\$(16)
28	G/L Amount #9	4	121	124	F2\$(27)	B\$(11)
29	Discount Status	1	125	125	F2\$(28)	B\$(17)
30	EOP Status	1	126	126	F2\$(29)	B\$(18)
31	Reserved	2	127	128	-	-

2-2-2 #A.APVOC - Voucher File Field Explanations

A record is set up for each voucher or credit memo entered into the system. The record contains vendor invoice information, plus the G/L distribution, discount status, payment status, and G/L transfer status codes.

Field	Explanation
Field 1 Voucher Code	A vendor key plus a one byte sequence number from 1 to 250 is a duplicate of the ISAM key.
Field 2 Voucher Date	Date the voucher was entered into the system
Field 3 Amount Due	The total dollar amount due for this voucher is equal to the total of all account distributions.
Field 4 Date Due	Date the voucher is due to be paid
Field 5 Discount Percent	The integer percent of any available discount to calculate Field 6, the Discount Amount, is optional.
Field 6 Discount Amount	If the dollar amount of an allowed discount is entered it is used to calculate Field 5, the Discount Percent.
Field 7 Discount Date	Last date to pay the voucher and earn a discount
Field 8 Invoice Number	An optional field identifies the vendor's invoice.
Field 9 Invoice Date	Optional vendor invoice date
Field 10 Voucher Status	A status code is used in payment selection, check writing, and end-of-period processing.

Voucher Status Codes:

- P - To be paid
- A - Don't pay
- W - Paid, check written
- C - Credit memo

2-2-2 #A.APVOC - Voucher File Field Explanations (continued)

Field	Explanation
Field 11 G/L Account #1	G/L distribution account #1
Field 12 G/L Amount #1	G/L distribution amount #1
Field 13 G/L Account #2	Optional G/L distribution account #2
Field 14 G/L Amount #2	Optional G/L distribution amount #2
Field 15 Account #3	Optional G/L distribution account #3
Field 16 Amount #3	Optional G/L distribution amount #3
Field 17 Account #4	Optional G/L distribution account #4
Field 18 Amount #4	Optional G/L distribution amount #4
Field 19 Account #5	Optional G/L distribution account #5
Field 20 Amount #5	Optional G/L distribution amount #5
Field 21 Account #6	Optional G/L distribution account #6
Field 22 Amount #6	Optional G/L distribution amount #6
Field 23 Account #7	Optional G/L distribution account #7
Field 24 Amount #7	Optional G/L distribution amount #7



2-2-2 #A.APVOC - Voucher File Field Explanations (continued)

Field	Explanation
Field 25 Account #8	Optional G/L distribution account #8
Field 26 Amount #8	Optional G/L distribution amount #8
Field 27 Account #9	Optional G/L distribution account #9
Field 28 Amount #9	Optional G/L distribution amount #9
Field 29 Discount Status	Discount Status  Discount Status Codes: Y - Discount taken N - Discount not taken (blank) - Credit Memo from the check program
Field 30 EOP Status	End-of-period transfer status  EOP status codes: Y - Passed to the G/L N - Not yet passed to the G/L X - Credit Memo from the check program, not yet passed to the G/L
Field 31 Reserved	Reserved for future use

2-2-3 #A.APVOC - Voucher File User Comment/Parameter Area Layout

The ISAM User Comment/Parameter Area for the Voucher File is used in a payment selection by date. It contains the totals and dates used for on-line check reconciliation of cash available and voucher amounts.

The ISAM User Comment/Parameter Area for the Voucher File has the following layout:

Field Number	Field Description	Field Width	Position From	Position To	Field Name	Program Variable
1	Voucher File Change Flag	2	1	2	T0\$	TT%
2	Pay Program Pay Date	4	3	6	T1\$	DY
3	Cash Available	8	7	14	T2\$	CA#
4	Discount Window Begin Date	4	15	18	T3\$	DB
5	Discount Window End Date	4	19	22	T4\$	DE
6	Due Date	4	26	29	T5\$	DU
7	Accumulated Due Amount	8	30	37	T6\$	TI#
8	Accumulated Discount Amount	8	38	45	T7\$	TW#
9	Total Debits	8	46	53	T8\$	TD#
10	Unused	78	54	128	-	-

2-3 #A.APGLT - GENERAL LEDGER TRANSFER FILE

2-3-1 General Ledger Transfer File Layout

The G/L Transfer File is a BASIC random file and has the following layout:

Field Number	Field Description	Field Width	Position From	Position To	Field Name	Program Variable
1	Account Number	6	1	6	F2\$(0)	STR\$(
2	Source Code	1	7	7	F2\$(1)	"A"
3	Reference	8	8	15	F2\$(2)	Unused
4	Description	24	16	39	F2\$(3)	Literal
5	Date	4	40	43	F2\$(4)	DA
6	Amount	4	44	47	F2\$(5)	AC(
7	Unused	81	48	128	-	Unused

2-3-2 #A.APGLT - General Ledger Transfer File Field Explanations

This file is created by the A/P System to interface with the General Ledger System. The account numbers entered in the Enter Vouchers Program (ETV) and the Vendor File Maintenance Program (VFM) must be valid account numbers within the General Ledger Chart of Accounts. Transactions having invalid account numbers will not be posted.

This transfer file is created during end-of-period processing and is read by the General Ledger Transaction Transfer Program within the General Ledger System. The file remains on the diskette until it is KILLED or overwritten during the next month's processing.

Field	Explanation
Field 1	Five digits uniquely identify a General Ledger account. The left three digits are the major account code; the right two digits, if present, are the sub-account or department code.
Field 2 Source Code	A single character denotes the source document or system that originated the transaction. This is always an "A" for the Accounts Payable System.
Field 3 Reference	Not used by the A/P System
Field 4 Description	Twenty-four blanks or a description of the A/P transaction
Field 5 Date	Date the transaction was processed in the End-of-Period Program
Field 6 Amount	Transaction debit or credit amount with a maximum of \$9,999,999.00, absolute
Field 7 Unused	Unused

2-4 #A.APSYS - SYSTEM PARAMETER FILE

2-4-1 #A.APSYS - System Parameter File Layout

The System Parameter File is a BASIC sequential file and has the following layout:

Field Number	Field Description	Maximum Field Width	Program Variable
1	Total Data Elements in the File	2	TE
2	System Name	24	VV\$(1)
3	Diskette Title/Version	24	VV\$(2)
4	Creation Date	8	VV\$(3)
5	Disk Type Code (H or F)	1	VV\$(4)
6	Company Name	24	VV\$(5)
7	Address 1 of 2	24	VV\$(6)
8	Address 2 of 2	24	VV\$(7)
9	G/L Present ? (Y or N)	1	VV\$(8)
10	G/L Account for Cash	5	VV\$(9)
11	G/L Account for A/P	5	VV\$(10)
12	G/L Account for Discount	5	VV\$(11)
13	Voucher Deletion Allowed (Y or N)	1	VV\$(12)

2-4-2 #A.APSYS - System Parameter File Field Explanations

The System Parameter File identifies the release and contains information specific to the installation. All application programs read this file.

Field	Explanation
Field 1 Total Data Elements	Number of data fields in the file (There are twelve data fields in the A/P System.)
Field 2 System Name	ACCOUNTS PAYABLE
Field 3 Title/Version	Title/Version identifies the version of the Accounts Payable Software. It verifies that the latest version of the programs is in use and it <u>must not be changed</u> . Users changing programs must add an identifier to the end of the original entry (maximum of 24 characters).
Field 4 Creation Date	The creation date of the current version of the A/P Software must be changed when any program is modified.
Field 5 Disk Type Code (H or F)	F or H identifies floppy or hard disk, respectively. This variable is used by the menu to select the proper utility submenu and by ISAM to determine the disk size.
Field 6 Company Name	The company name (up to 24 characters) is taken from the parameter file of the main <u>data</u> disk to be printed on reports.
Field 7 Address 1 of 2	First line of the company address (maximum of 24 characters)
Field 8 Address 2 of 2	Second line of the company address (maximum of 24 characters)
Field 9 G/L Present?	A software configuration code specifies whether the General Ledger Software is used with the A/P Software (Y or N).
Field 10 G/L Account for Cash	Five-digit G/L account code for cash

2-4-2 #A.APSYS - System Parameter File Field Explanations (continued)

Field	Explanation
Field 11 G/L Account for A/P	Five-digit G/L account code for Accounts Payable
Field 12 G/L Account for Discount	Five-digit G/L account code for discounts earned
Field 13 Voucher Deletion Allowed (Y or N)	A Y allows the use of the Delete Voucher Program (DVO), and an N does not.

2-5 #A.APLNK - SYSTEM LINKAGE FILE

2-5-1 #A.APLNK - System Linkage File Layout

The System Linkage File is a BASIC sequential File and has the following layout:

Field Number	Field Description	Field Width	Program Variable
1	Data File Drive Number	1	DK%
2	Current Date	8	VD\$
3	Menu/Submenu Pointer	1	IM
4	Program Selection Pointer	1	IP



2-5-2 #A.APLNK - System Linkage File Field Explanations

The System Linkage File contains information linking the applications programs to the menu program and the data disk. This file also contains the A/P System default date.

Field	Explanation
Field 1 Data File Drive Number	The drive number of the data disk
Field 2 Current Date	The date entered in the Master Activity Selection Menu is the default date used by all programs.
Field 3 Menu/Submenu Pointer	A pointer used by the Menu Program to determine whether to display the Master Activity Selection Menu, the Report Generation Selection Menu, or the Utility Function Selection Menu.
Field 4 Program Selection Pointer	A pointer to the program last selected in the Menu Program

2-6 #A.APHLP - HELP FILE

The Help File aids the user in answering program prompts. If a prompt is not understood, enter a "?" and an explanation is displayed. After the explanation, the prompt is repeated. All accounting programs access the Help File.

The Help File is a BASIC random file that contains explanatory messages preceded by a two sector, sorted directory. The directory contains the Help message number, the starting record number, and the number of records in the message. Each prompt has a message number stored in the variable Q. The Help File Subroutine is called when a "?" is responded to a prompt. The prompt message is found using a binary search on the directory. If Q equals zero, the operator is referred to the manual. If message Q is not in the file, "\*\*\* <MSG>" is displayed followed by the value of Q.

2-7 #CHKDATA - CHECK REGISTER FILE

The Check Register File is a BASIC sequential file produced by the Print Payables Checks Program and used by the Check Register Program. It contains all the information printed on each vendor's check.

2-8 #APTEMP# - TEMPORARY FILE FOR THE \$A.APETV PROGRAM

This is a BASIC sequential file and is used by the Enter Vouchers Program to store information as each voucher is entered. This avoids the delay caused by ISAM record creation during the entry step. After "END" is entered terminating a group of voucher entries, the file is sequentially read and the stored information is used to create the voucher in the Voucher File.

2-9 <<TEMP>> - TEMPORARY FILE FOR THE \$A.APCAS PROGRAM

This file is used for the Cash Requirements Program sort/merge.

2-10 >>TEMP<< - TEMPORARY FILE FOR THE \$A.APCAS PROGRAM

This file is used for the Cash Requirements Program sort/merge.

2-11 SORT - TEMPORARY FILE FOR THE \$A.APCAS PROGRAM

This file is used for the Cash Requirements Program sort/merge.

2-12 TESTVEN - ORIGINAL VENDOR TEST DATA FILE

This is a copy of the Vendor File used to produce the user manual examples. It can be used for tests or demonstrations by creating a copy named #A.APVEN with the COPYR utility. WARNING: This will destroy information in the current Vendor File.

2-13 TESTVOC - ORIGINAL VOUCHER TEST DATA FILE

This is a copy of the Voucher File used to produce the user manual examples. It can be used for tests or demonstrations by creating a copy named #A.APVOC with the COPYR utility. WARNING: This will destroy information in the current Voucher File.

2-12 TESTER - ORIGINAL VECTOR TEST DATA FILE

This is a copy of the Vector file used to produce the next version. It can be used for tests of dissemination by creating a copy using the same test data. WARNING: This will destroy information in the original Vector file.

2-13 TESTER - ORIGINAL VECTOR TEST DATA FILE

This is a copy of the Vector file used to produce the next version. It can be used for tests of dissemination by creating a copy using the same test data. WARNING: This will destroy information in the original Vector file.



3-1 \$A.APAGE - AGED PAYABLES PROGRAM

3-1-1 Data Files

- #A.APHLP - Read only
- #A.APLNK - Read only
- #A.APSYS - Read only
- #A.APVOC - Read only

3-1-2 Functional Description

\$A.APAGE generates an aging report with current, 30, 60, and over 60 day credit columns. The program accumulates open invoice totals for each vendor and lists the totals in the proper column according to the due date. The report may be listed on the printer or display screen.

3-1-3 Code Breakdown

Line Numbers	Description
00000-00006	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping.
00500-00520	Initialize the variables and set up and open the Voucher File.
00530-00540	Query for the aging date.
00550-00570	Use the special algorithm to convert the aging date to the form used in calculating the age of the vouchers.
00600-00710	Query for the listing device and then print the headers.
00720-00740	Read the Voucher File and skip any vouchers with a status code 'W' (check written).
00745-00755	Initialize the current vendor and due date variables. Check if this is the next vendor.
00757-00800	Determine the age of the voucher.
00900-00920	Print the vendor code and the totals for each period.
00930-00940	Accumulate final totals and clear the current totals.
00950-00980	Set the new vendor code for matching and start a new page, if necessary.

3-1-3 Code Breakdown (\$A.APAGE continued)

Line Numbers Description

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01000-01000 Top of page prompt routine

19900-19980 Close all the files, print the final totals, and prompt to return to the system menu.

20000-20060 Routine with a special algorithm to convert the aging date to a unique number that is used in aging the vouchers

30000-30070 The top of page and heading routine

46110-46120 Unnecessary unpacking of the G/L Account/Amount pairs from a voucher record has been removed to speed voucher processing.

47610-47620 Unnecessary packing of the G/L Account/Amount pairs into a voucher record has been removed to speed voucher processing.

48540-48550 Unnecessary field definition of the G/L Account/Amount pairs has been removed to speed voucher processing.

3-2 \$A.APCAS - CASH REQUIREMENTS PROGRAM

3-2-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVOC - Read only  
<<TEMP>> - Temporary  
>>TEMP<< - Temporary  
SORT - Temporary

3-2-1 Functional Description

\$A.APCAS generates a list of vouchers in chronological groups, with daily cash requirements totals, based on the due date or a discount date selected by the operator. The report may be listed on the printer or the display screen.

3-2-3 Code Breakdown

Line Numbers Description

---

00000-00006 Identify the program and list the revision date.  
Set the control characters off and clear string space.  
Initialize the file names and other constants.  
Print the screen heading and enable error trapping.

00500-00505 Initialize the format string and the flags, and set  
the sort work disk to the data disk.

00510-00520 Open and set up the Voucher File.

00530-00560 Query to determine if the report is to sorted by the  
Discount Date or Due Date.

00600-00630 Query for the listing device.

00700-00740 Call the routine to produce the Sorted Key File and  
data record pointers. Print the heading on the Control  
Report.

00750-00770 Open the Temporary Sort File and get the Sort File  
pointers.

00780-00830 Read the Temporary File and get the vouchers directly.  
Decide which date is to be used, skip the vouchers  
marked paid, and check for credits.

00840-00860 Print the vouchers on the Control Report, grouped by  
date.



3-2-3 Code Breakdown (\$A.APCAS continued)

Line Numbers	Description
00865-00885	Calculate the totals.
00900-00910	Print the daily totals.
00920-00950	Reset the control variables and return to read the next voucher.
01000-01000	Top of page prompt routine
18000-18020	Set up a new voucher ID extension number.
18100-18200	Change a voucher ID to a printable form.
18210-18230	Change a voucher ID from the printable form to the key form.
18500-18540	Retrieve a record from the Voucher File.
19900-19980	Close all files and prompt to return to the system menu.
30000-30070	Top of page and heading routine
40000-40075	Set up the sort.
40080-40120	Perform the sort algorithm and close the Sort File.
41000-41550	If the disk is full, print an error message.
43000-43060	Sort algorithm
43070-43140	Merge
43150-43530	Close the Sort File and rename the Temporary File.
46110-46120	Unnecessary unpacking of the G/L Account/Amount pairs from a voucher record has been removed to speed voucher processing.
47610-47620	Unnecessary packing of the G/L Account/Amount pairs into a voucher record has been removed to speed voucher processing.
48540-48550	Unnecessary field definition of the G/L Account/Amount pairs has been removed to speed voucher processing.

### 3-3 \$A.APCKR - CHECK REGISTER PROGRAM

#### 3-3-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only

#### 3-3-2 Functional Description

\$A.APCKR generates a register with items that appear on each vendor check. The option to run this program is provided at the end of the Print Payables Checks Program. The register is listed on the printer.

#### 3-3-3 Code Breakdown

Line Numbers Description

---

00000-00006	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping. Set the logical page size.
00100-00110	Dimension the arrays and initialize the print strings and totals.
00200-00210	Query for top of page and open the Check Register File.
00220-00220	Set the PRINT output to the printer and input the check date.
00310-00350	Print the page and column headings.
00400-00740	Print the check information and accumulate totals.
00900-00970	Print the totals and reset the PRINT output to the CRT.
19900-19980	Reset the error control, close all files, and prompt for return to the system menu.
40000-40020	Unpack the voucher number.

3-4 \$A.APCKS - PRINT PAYABLES CHECKS PROGRAM

3-4-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVEN - Updated  
#A.APVOC - Updated  
#CHKDATA - Created

3-4-2 Functional Description

\$A.APCKS scans all vouchers and prints a check for each vendor that has one or more vouchers selected to be paid. The Vendor File is updated and the selected vouchers are marked paid. All vendor credit memos are accumulated and marked paid. If a credit balance remains after paying vouchers, a new credit memo is created.

3-4-3 Code Breakdown

Line Numbers Description

-----  
00000-00007 Identify the program and list the revision date.  
Set the control characters off and clear string space.  
Initialize the file names and other constants.  
Print the screen heading and enable error trapping.  
Set the logical page size.  
  
00500-00510 Call the subroutine to dimension storage, set up and  
open the ISAM files, initialize constants, and print  
masks.  
00600-00770 Query for check positioning and print check mask.  
00860-00940 Query for check date and starting number.  
01200-01265 Loop to print checks and accumulate totals.  
09000-09150 Print the total number and the total amount of checks.  
10000-10030 Output check information to the Check Register File.  
18000-18020 Convert the voucher ID to a printable form.  
19900-19980 Close all files, query for check register, reset error  
control, and prompt for a return to the system menu.  
22000-22130 Check for vouchers marked for payment and accumulate  
totals.

3-4-3 Code Breakdown (\$A.APCKS continued)

Line Numbers	Description
22499-22520	Print a void check.
22600-22620	Set up for check mask.
22999-23180	Print the check stub.
23700-24520	Print the check and increment the check number and the total number of checks printed.
25000-25040	Update the YTD payments, the balance, the last payment, and the date of last payment.
25999-26040	Print the invoice number, date, amount, discount, and net amount on the check stub.
28000-28330	A special algorithm to take the check amount in CA# and return the spelled out amount in OP\$
30000-30070	Accumulate all credit memos and create a single credit memo of the total amount.
40000-43999	Dimension storage, set up and open the ISAM files, initialize constants, and print masks.
46110-46120	Unnecessary unpacking of the G/L Account/Amount pairs from a voucher record has been removed to speed voucher processing.
47610-47620	Unnecessary packing of the G/L Account/Amount pairs into a voucher record has been removed to speed voucher processing.
48111-48113	Read the Voucher File Change Flag from the User Comment/Parameter Area.
48540-48550	Unnecessary field definition of the G/L Account/Amount pairs has been removed to speed voucher processing.
49002-49004	Write the Voucher File Change Flag to the user Comment/Parameter Area.

3-5 \$A.APCRE - FILE CREATION PROGRAM

3-5-1 Data Files

- #A.APHLP - Read only
- #A.APLNK - Read only
- #A.APSYS - Read only
- #A.APVEN - Created
- #A.APVOC - Created

3-5-2 Functional Description

\$A.APCRE creates the Vendor and Voucher Files. The files created have the necessary ISAM header information, but contain no data records.

3-5-3 Code Breakdown

Line Numbers Description

- 
- 00000-00005 Identify the program and list the revision date.  
Set the control characters off and clear string space.  
Initialize the file names and other constants.  
Print the heading and initialize error trapping.
  - 00100-00100 GOTO the code to create the files.
  - 01100-00160 Disk set up subroutine to query for disk drive and disk change and then print the insert disk message and mount the disk.
  - 06000-06040 Call the disk set up subroutine, print a warning message and provide an option to abort the file creation.
  - 06050-06055 Set up for ISAM files.
  - 06060-06310 Query for and create the ISAM files.
  - 19900-19930 Reset the error control and prompt for a return to the system menu.

### 3-6 \$A.APDVO - DELETE VOUCHERS PROGRAM

#### 3-6-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVEN - Updated  
#A.APVOC - Updated

#### 3-6-2 Functional Description

\$A.APDVO deletes vouchers with errors. It can only be run if the voucher delete option is enabled in the System Parameter File. A warning message is given before deleting a voucher already passed to the General Ledger. A Control Report is optional.

#### 3-6-3 Code Breakdown

Line Numbers	Description
00000-00006	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping.
00500-00520	Check the System Parameter File to determine if voucher deletion is allowed.
01500-01600	Query to determine if a Control Report is wanted and then print the heading.
01610-01657	Query for the voucher key and check the voucher status for any errors.
01660-01660	Print the voucher field headings and the voucher to be deleted.
01670-01695	Query to determine if this is the voucher to be deleted. If a voucher is selected for payment, set the Payment Reconciliation Flag. Delete the voucher
01700-01710	Check for the end of a page if a Control Report is requested.
02000-02010	Check whether there are any more vouchers to be deleted.
18000-18020	Not used

3-6-3 Code Breakdown (\$A.APDVO continued)

Line Numbers Description

---

18100-18200	Change a voucher ID to printable form.
18210-18230	Change a voucher ID from printable form to key form.
18500-18540	Not used
19900-19980	Close all the files and prompt to return to the system menu.
20500-20530	Check for the top of the page.
21000-22020	Print the headings for the Control Report.
22200-22205	Print the end of report message.
22500-22610	Print the voucher.
40000-40170	Initialize the print strings. Set up and open the ISAM files.
48111-48113	Read the Voucher File Change Flag from the User Comment/Parameter Area.
49002-49004	Write the Voucher File Change Flag to the user Comment/Parameter Area.



3-7 \$A.APEOP - END-OF-PERIOD PROGRAM

3-7-1 Data Files

- #A.APHLP - Read only
- #A.APLNK - Read only
- #A.APSYS - Read only
- #A.APVOC - Updated
- #A.APGLT - Created

3-7-2 Functional Description

\$A.APEOP creates the G/L Transfer File. All vouchers are scanned and totals are accumulated for the G/L distribution accounts of all vouchers entered on or before a cutoff date. Paid vouchers are deleted after their distributions are accumulated. If the operator specifies that the period is the end of a year, all YTD fields in the Vendor File are cleared. A summary of the G/L distribution for the period is printed in a G/L Transaction Register.

3-7-3 Code Breakdown

Line Numbers Description

---

00000-00007	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize storage, the file names, and other constants. Print the heading and initialize error trapping.
00008-00009	Query for top of forms.
01000-01090	Check for existing Transfer File, query to determine if it has been transferred, and print a warning if it was not transferred.
01100-01110	Query for the end-of-period date and set up and open the Voucher File.
01120-01410	Read the file sequentially and accumulate totals.
01500-01500	Check to see if any transfers are to be written.
01510-01530	Create the G/L Transfer File.
01540-01670	Print the G/L Transaction Register.
01700-01720	Close the G/L Transfer File and query for end of year.
01730-19899	Scan the Vendor File sequentially and zero the YTD fields.



3-7-3 Code Breakdown (\$A.APEOP continued)

Line Numbers	Description
19900-19980	Close all files, reset error control, and prompt for a return to the system menu.
21000-21030	Print the headings for the Transaction Register.
38100-38120	Convert the voucher ID to printable form.
38200-38230	Change the voucher ID from printable form to key form.
39000-39999	Compute the Accounts Payable credit amount.
40000-45999	Print the totals on the G/L Transaction Register.
48101-48104	Read the Voucher File Change Flag and the totals used for on-line check reconciliation from the User Comment/Parameter Area.
49001-49004	Write the Voucher File Change Flag and the totals used for on-line check reconciliation to the User Comment/Parameter Area.

3-8 \$A.APETV - ENTER VOUCHERS PROGRAM

3-8-1 Data Files

- #A.APHLP - Read only
- #A.APLNK - Read only
- #A.APSYS - Read only
- #A.APVEN - Updated
- #A.APVOC - Updated
- #APTEMP# - Temporary

3-8-2 Functional Description

\$A.APETV is used to enter vendor invoice information and create corresponding vouchers. Information is also obtained from the Vendor File to create automatic vouchers for regular payments. A control report listing the created vouchers may be printed.

3-8-3 Code Breakdown

Line Numbers Description

---

00000-00006	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping. Set the logical page size.
00007-00007	Call a subroutine to initialize the print strings and open and set up the ISAM files.
00530-00560	Query for payment selection information.
00570-00920	Open a Temporary File, query for voucher information, check for errors, and write correct voucher information in the Temporary File.
01000-01010	Query for Control Report.
01015-01280	Open the Temporary File, sequentially read the voucher information, perform an error check for the existence of the vendor, and create an ISAM voucher.
01300-01330	KILL the Temporary File and query for more voucher entries or program termination.
03000-0320	Voucher entry error checking and error messages
04000-04080	Scan the Vendor File for Auto Voucher information and create the Auto Voucher.

3-8-3 Code Breakdown (\$A.APETV continued)

Line Numbers	Description
18000-18020	Get the next voucher extension.
18100-18120	Convert the voucher ID to printable form.
18500-18540	New voucher extension existence and wraparound check
19900-19980	Close all files, reset error control, and prompt for a return to the system menu.
20500-22205	Top of page and end of report subroutines
22500-22610	Print the voucher on the Control Report.
24000-24010	Entry Rejected Subroutine
40000-40170	Subroutine to initialize the print strings and set up and open the ISAM files
48111-48113	Read the Voucher File Change Flag from the User Comment/Parameter Area.
49002-49004	Write the Voucher File Change Flag to the user Comment/Parameter Area.

3-9 \$A.APLNK - LINKAGE FILE MAINTENANCE PROGRAM

3-9-1 Data Files

#A.APLNK - Updated or Created

3-9-2 Functional Description

\$A.APLNK creates or updates a file containing the data disk drive number, the system date, and pointers to the submenu and the last program selection made in the AP MENU Program.

3-9-3 Code Breakdown

Line Numbers Description

---

00000-00100	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the heading and enable error trapping.
01100-01160	Prompt for and mount the disk to be processed.
02000-00210	Prompt to determine if a create or update is required and transfer control to that function.
04000-04030	Create the file with IM=1, IP=0, and null entries for data drive and date. Close the file.
05000-05660	Perform the update function by reading the existing file and by looping for prompt, input, and output operations. Transfer control to the program termination subroutine.
05700-05799	Accept input for an update operation by calling the proper type of input routine. The selection is made by examining the type code in array IC\$.
05800-05859	Heading subroutine
05900-05980	Define, read, and store the field description data.
19900-19930	Print the closing message, reset error trapping, unload all disks, and terminate the program.

3-10 \$A.APOPE - LIST OPEN VOUCHERS PROGRAM

3-10-1 Data Files

- #A.APHLP - Read only
- #A.APLNK - Read only
- #A.APSYS - Read only
- #A.APVOC - Read only

3-10-2 Functional Description

\$A.APOPE generates a list of all unpaid vouchers and unapplied credit memos in the Voucher File. Totals are given for the number of vouchers and the amount due by due date and discount date. The report may be listed on the printer or the display screen.

3-10-3 Code Breakdown

Line Numbers Description

---

00000-00006	Identify the program and the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping.
00500-00520	Initialize the format string and open and set up the Voucher File.
00600-00700	Query for the listing device.
00710-00755	Print the heading. Read the Voucher File and skip all vouchers marked 'W' (check written).
00756-00810	Convert the voucher to a printable form and print the open voucher.
01000-01000	Top of page prompt routine
18000-18200	Change a voucher ID to printable form.
18210-18230	Change a voucher ID from printable form to key form.
18500-18540	Retrieve a record from the Voucher File.
19900-19980	Close all the files, print the final totals, and prompt for a return to the system menu.
30000-30070	Print the heading for the Open Voucher Report.

3-10-3 Code Breakdown (\$A.APOPE continued)

Line Numbers	Description
46110-46120	Unnecessary unpacking of the G/L Account/Amount pairs from a voucher record has been removed to speed voucher processing.
47610-47620	Unnecessary packing of the G/L Account/Amount pairs into a voucher record has been removed to speed voucher processing.
48540-48550	Unnecessary field definition of the G/L Account/Amount pairs has been removed to speed voucher processing.

3-11 \$A.APPAY - DETERMINE WHAT IS TO BE PAID PROGRAM

3-11-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVOC - Updated

3-11-2 Functional Description

\$A.APPAY is used to select vouchers to be paid by the Print Payables Checks Program. The program can be used for on-line reconciliation of cash available and voucher amounts.

3-11-3 Code Breakdown

Line Numbers Description

-----  
00000-00006 Identify the program and list the revision date.  
Set the control characters off and clear string space.  
Initialize the file names and other constants.  
Print the screen heading.

00007-00007 Call a subroutine to initialize constants and set up and  
open the ISAM files.

00499-01090 Query for payment selection information.

01100-01150 Scan the Voucher File sequentially and skip all paid  
vouchers.

01160-01170 Mark the voucher for payment and restore it to the file.

01180-01200 Check for vouchers to be included, mark them for pay-  
ment, and restore them to the file.

01210-01220 Check the exclude list for the voucher and then restore  
the voucher to the file.

01230-01250 Process discounts and restore the voucher to the file.

01260-01380 Print the amounts for check reconciliation after a scan  
by date.

01390-01740 Query for and process explicit selection.

01745-19899 Query for and print the Selected Vouchers Report.

3-11-3 Code Breakdown (\$A.APPAY continued)

Line Numbers Description

19900-19999	Reset error control, close all files, and prompt for a return to the system menu.
20000-20999	Query Vendor Subroutine
21000-29999	Heading subroutine for the Selected Vouchers Report
30000-35999	Subroutines for explicit inclusion/exclusion
36000-37999	Subroutine to change the date to a unique number for calculations
38100-39999	Subroutine to convert a voucher ID to a printable form and then change it back to key form
40000-40010	Subroutine to initialize constants and set up and open ISAM Files
46110-46120	Unnecessary unpacking of the G/L Account/Amount pairs from a voucher record has been removed to speedup voucher processing.
47610-47620	Unnecessary packing of the G/L Account/Amount pairs into a voucher record has been removed to speedup voucher processing.
48101-48104	Read the Voucher File Change Flag and the totals used for on-line check reconciliation from the User Comment/Parameter Area.
48540-48550	Unnecessary fielding of the G/L Account/Amount pairs from a voucher record has been removed to speedup voucher processing.
49001-49004	Write the Voucher File Change Flag and the totals used for on-line check reconciliation to the User Comment/Parameter Area.



3-12 \$A.APQUE - QUERY VENDOR PROGRAM

3-12-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVEN - Read only  
#A.APVOC - Read only

3-12-2 Functional Description

\$A.APQUE displays vendor record information and all attached vouchers and credit memos. The vendors are selected individually by ID and the information may be listed on the display screen or printer.

3-12-3 Code Breakdown

Line Numbers Description

---

00000-00006 Identify the program and list the revision date.  
Set the control characters off and clear string space.  
Initialize the file names and other constants.  
Print the screen heading and enable error trapping.  
Set the logical page size.

00007-00007 Call the subroutine to set up and open the Vendor and  
Voucher Files.

01000-01020 Query for the vendor ID and retrieve the vendor record.

01030-01040 Query for the listing device.

01045-01150 Print the current vendor's information.

01160-01265 Retrieve and print any open vouchers.

01270-01290 If there are no more open vouchers, skip to the end of  
the page and query for the next vendor.

19900-19980 Close files, reset error control, and prompt for a re-  
turn to the system menu.

21000-21070 Heading Subroutine for the Query Report

38100-38160 Convert a voucher ID to printable form.

40000-40000 Subroutine to set up and open the ISAM files

40010-40020 Top of forms prompt subroutine

3-12-3 Code Breakdown (\$A.APQUE continued)

Line Numbers	Description
46110-46120	Unnecessary unpacking of the G/L Account/Amount pairs from a voucher record has been removed to speed voucher processing.
47610-47620	Unnecessary packing of the G/L Account/Amount pairs into a voucher record has been removed to speed voucher processing.
48540-48550	Unnecessary field definition of the G/L Account/Amount pairs has been removed to speed voucher processing.

3-13 \$A.APSYS - SYSTEM PARAMETER FILE MAINTENANCE PROGRAM

3-13-1 Data Files

#A.APSYS - Updated

3-13-2 Functional Description

\$A.APSYS creates and maintains installation and version dependent information in the System Parameter File.

3-13-3 Code Breakdown

Line Number	Description
00000-00095	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading.
00100-00100	Enable error trapping, call field prompt initialization subroutine and GOTO create/update query.
01100-01160	The Disk Set Up Subroutine queries for the disk drive number and change option and then mounts the disk.
02000-02100	Query for create or update.
04000-04020	Create a new System Parameter File.
05000-05799	Update the System Parameter File.
05800-05859	Print the screen heading for a file update.
05900-05999	Field prompt initialization subroutine
10000-10020	Error checking for G/L account number length
19900-19930	Reset error control, prompt for a return to the system menu, and unload the disk.

### 3-14 \$A.APVFL - VENDOR FILE LIST PROGRAM

#### 3-14-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVEN - Read only

#### 3-14-2 Functional Description

\$A.APVFL displays the information stored in the Vendor File for each vendor. The information may be listed on the printer or the display screen. All vendors may be listed or individual vendors may be selected by vendor ID.

#### 3-14-3 Code Breakdown

Line Numbers	Description
00000-00510	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping.
00525-00605	Query for the listing device.
00610-00650	Query for 'All' or 'Selected' vendors and set the appropriate flag.
00660-00700	Continue processing here if all vendors are to be displayed. Retrieve and display the record.
00750-00805	Continue processing here if selected vouchers are to be displayed.
00810-00850	Query to determine if more vendors are to be displayed.
19900-19998	Close all files and prompt for a return to the system menu.
11999-20120	Display the record.
20500-21010	Print the heading on each page.
40000-40080	Open the ISAM files and set up the headings.

3-15 \$A.APVFM - VENDOR FILE MAINTENANCE PROGRAM

3-15-1 Data Files

#A.APHLP - Read only  
#A.APLNK - Read only  
#A.APSYS - Read only  
#A.APVEN - Updated  
#A.APVOC - Read only

3-15-2 Functional Description

\$A.APVFM is used to enter vendors into the system, change fields within existing vendor records, and to delete vendors from the system. A vendor may be deleted only if there are no vouchers attached to that vendor.

3-15-3 Code breakdown

Line Numbers Description

---

00000-00006	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping.
00500-00500	Initialize the prompt messages and set up and open the ISAM files.
00860-00900	Query for the type of file maintenance.
01000-01270	The Vendor Addition Subroutine verifies that the vendor record is not already in the file. If not, it queries for each field, allows for any field changes, and adds the vendor record to the Vendor File.
02000-02190	The Vendor Change Subroutine verifies that the vendor record exists, displays the data fields, allows for any field changes, and restores the vendor record to the Vendor File.
003000-00360	The Vendor Deletion Subroutine verifies that the vendor record exists and deletes it if no open vouchers or credit memos are attached to it.
19900-19980	Close all the files and prompt for a return to the system menu.
20000-21000	Query for or zero the Auto Voucher fields.
30000-30020	Query for the Vendor Code.

3-15-3 Code Breakdown (\$A.APVFM continued)

Line Numbers Description

---

30100-30120 Query for the Vendor Name.  
30200-30220 Query for Address 1.  
30300-30320 Query for Address 2.  
30400-30410 Query for the Area Code and Phone Number.  
30500-30510 Query for YTD Purchases.  
30600-30620 Query for YTD Payments.  
30700-30710 Query for the Current Balance.  
30800-30810 Query for the Last Payment.  
30900-30920 Query for the Last Payment Date.  
31000-31020 Query for the Monthly Entry Flag.  
31100-31120 Query for the Due Day of Month.  
31200-31210 Query for the Debit Account #1.  
31300-31310 Query for the Debit Amount #1.  
31400-31410 Query for the Debit Account #2.  
31500-31510 Query for the Debit Amount #2.  
31600-31610 Query for the Month Last Paid.  
37000-37090 Display the current record's contents.  
40000-40360 Initialize the prompt strings.

3-16 AP MENU - MENU PROGRAM

3-16-1 Data Files

#A.APHLP - Read only  
#A.APSYS - Read only  
#A.APLNK - Updated

3-16-2 Functional Description

AP MENU is used by the operator to select the programs and utilities to be run and to set the system date.

3-16-3 Code Breakdown

Line Numbers	Description
00000-00005	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Print the screen heading and enable error trapping.
00320-00320	Select the proper menu using the Menu/Submenu Pointer.
00330-01045	The Master Activity Selection Menu displays the menu choices and runs the selected program.
01050-01064	The Report Generation Selection Menu displays the menu choices and runs the selected program or calls a new subroutine.
01080-01080	The Utility Function Menu determines which utility menu to run from the system parameters.
01081-01199	Display the menu choices and run the selected utility.
01900-01920	Input new current date subroutine
02000-02020	Rewrite the System Linkage File with an updated Menu/Submenu Pointer, Program Selection Pointer, and possibly a new Current Date.
02100-02229	Menu Display Subroutine
10000-10250	Data statements for the menu display
19900-19980	Reset the error control and set the control characters on.

1-70 12 HOUR - WEEK PROGRAM

3-70-1 Data Files

44.4444 - Read only  
44.4444 - Read only  
44.4444 - Updated

3-70-2 Functional Description

It is used by the operator to select the program and utilities to be run and to set the system date.

3-70-3 Code Breakdown

Line Number	Description
0000-0000	Identify the program and list the revision date. Set the control characters off and clear string space. Initialize the file names and other constants. Erase the screen display and verify every character.
0030-0030	Select the program name using the Main/Menu pointer.
0030-0040	The master control table selection Menu displays the main options and sets the selected program.
0050-0100	The report generation selection Menu displays the main options and sets the selected program or utility's main subroutine.
0100-0150	The utility function Menu displays when utility menu is entered from the system programmer.
0150-0170	Display the menu choice and set the selected utility.
0190-0190	Input new current date subroutine.
0200-0200	Reverse the Master linkage file with an update menu. System pointer, Program selection pointer, and initialize a new current date.
0210-0210	Main display subroutine.
1000-1000	Data statements for the main display.
1000-1000	Reset the error control and set the control characters.



The following are Variable Definitions and their uses in the program. The operators in the Account System Variable Definitions are defined in the Common Section and not repeated in this program.

2.1.1 - Account Variable

2.1.2 - Account Variable

2.1.3 - Account Variable

SECTION 4

PROGRAM VARIABLES

2.1.4 - Account Variable

2.1.5 - Account Variable

2.1.6 - Account Variable

2.1.7 - Account Variable

2.1.8 - Account Variable

2.1.9 - Account Variable

2.1.10 - Account Variable

2.1.11 - Account Variable

2.1.12 - Account Variable

2.1.13 - Account Variable

2.1.14 - Account Variable

2.1.15 - Account Variable

2.1.16 - Account Variable

2.1.17 - Account Variable

2.1.18 - Account Variable

2.1.19 - Account Variable

2.1.20 - Account Variable

2.1.21 - Account Variable

2.1.22 - Account Variable

2.1.23 - Account Variable

2.1.24 - Account Variable

2.1.25 - Account Variable

2.1.26 - Account Variable

2.1.27 - Account Variable

2.1.28 - Account Variable

2.1.29 - Account Variable

2.1.30 - Account Variable

2.1.31 - Account Variable

2.1.32 - Account Variable

2.1.33 - Account Variable

2.1.34 - Account Variable

2.1.35 - Account Variable

2.1.36 - Account Variable

2.1.37 - Account Variable

2.1.38 - Account Variable

2.1.39 - Account Variable

2.1.40 - Account Variable

2.1.41 - Account Variable

2.1.42 - Account Variable

2.1.43 - Account Variable

2.1.44 - Account Variable

2.1.45 - Account Variable

2.1.46 - Account Variable

2.1.47 - Account Variable

2.1.48 - Account Variable

2.1.49 - Account Variable

2.1.50 - Account Variable

## PROGRAM VARIABLES

The following are Variable Definition and Variable Cross Reference lists for the programs in the Accounts Payable System. Variable Definitions for variables in the Common Section are not redefined for each program.

4-1 \$A.APAGE - AGED PAYABLES PROGRAM

4-1-1 \$A.APAGE - Aged Payables Program Variable Definitions

Variable Definition

---

AD!	Aging date
AD\$	Aging date
CV\$	Current vendor
D1!	1-30 days
D2!	31-60 days
DD	Aging days used in aging the voucher
DUE!	Due date
FM\$	Format string
HV\$	New or existing vendor code
INITIAL	Flag to determine if a new vendor code is to be printed
MM	Aging month used in aging vouchers
MO(	Array to hold month of aging date
PG	Page counter
T	Unique number used in aging vouchers
T1#(	Array to hold current, 1-30, 31-60, and over 60 day credit totals
T2#(	Array to hold final accumulated totals
TV	Total vouchers
YY	Aging year used in aging vouchers

4-1-2 \$A.APAGE - Variable Cross Reference

Variable References

---

AD!	550, 560, 570, 760
AD\$	540, 30015
B#(	757, 760, 770, 780, 790
B\$(	740, 745
CV\$	745, 750, 755, 960
D!	560, 570, 20020, 20060
D1!	560, 780
D2!	570, 770
DD	560, 570, 20020, 20030, 20040, 20060
DP%	19980
DUE!	745, 760, 770, 780
ER%	730
FI%	520
FM\$	500, 920, 19935
FNSD!(	550, 745
HV\$	750, 755, 900, 960
I	910, 920, 930, 940, 19935
I1\$	1000
II	20030
INITIAL	500, 750
LC	970, 19940, 30060
LP	620, 700, 970, 19945
MM	20020, 20040, 20050, 20060

4-1-2 \$A.APAGE - Variable Cross Reference (continued)

Variable References

---

MO	20060
MO(	20000, 20010, 20020, 20040, 20060
PG	30010
PN\$	19950
Q	530, 600, 19960
Q\$	530, 600, 19960
QS	540
R\$	540, 550
RL	540
RL\$	620, 630
SC\$	700
T	20020
T1#(	505, 757, 760, 770, 780, 790, 920, 930, 940
T2#(	505, 930, 19935
TV	795, 19915
VD\$	540
YY	20020, 20030, 20060

4-2 \$A.APCAS - CASH REQUIREMENTS PROGRAM

4-2-1 \$A.APCAS - Cash Requirements Program Variable Definitions

Variable Definition

---

BT#	Net Amount
DD\$	"DISCOUNT" or "DUE"
DT#	Daily Total
EN	If End of File is reached, set True; otherwise, set False.
FM\$	Format string
HD\$	Discount date
INDEX%	Flag
INITIAL	Print Pay Date Flag
K\$	Record key
KC\$	Blanks
05-09	Internal ISAM variable used in the Sort/Merge
09(	Internal ISAM array used in the Sort/Merge
OE!	Internal ISAM variable used in the Sort/Merge
OI	Data to be sorted
OK!	Data to be sorted
OO	ISAM current page number in the buffer
PD\$	Discount date
PF%	Flag to print date on the first voucher of a date group
SD%	Sort work disk drive number
SK!	Defines the key and printer area
SK!(	Defines the key and printer Area
SN	Number of fields in the buffer area
SP	Sort File Pointer
SP(	Array of Sort File Pointers
WI	Sort File number
WO	Temporary File number

4-2-2 \$A.APCAS - Variable Cross Reference

Variable References

---

#2	780, 40015
#5	760
#WI	43090, 43110, 43130
#WO	43110, 43120, 43130, 43140, 43530
A\$(	18000, 18010, 18020, 18500, 18530
B#(	855, 860, 865
B\$(	795, 800, 18010, 18100, 18110, 18120, 18230, 18510
BT#	865, 870, 875
DD\$(	540, 550, 700, 795, 30015, 40070
DK%	505
DP%	19980
DT#	875, 910, 920
E	43510
E%	18200, 18210, 18220
EN	40010, 40100, 43000, 43180
ER%	18520, 18540, 40060
F2\$(	795, 40070
FI%	520, 18510
FM\$	500, 855, 860, 870, 910
HD\$	820, 830, 840, 930
I1\$	1000
IK	18100, 18120, 18200, 18210, 18220
INDEX%	40000

4-2-2 \$A.APCAS - Variable Cross Reference (continued)

Variable References

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INITIAL	500, 820
K\$	40015, 40050
KA\$	18500, 18530
KC\$	503, 40050
KEY\$	18510
KH\$	18110, 18120, 18210, 18230
KI	18000, 18010, 18020
KO\$	850, 18100, 18120
KS	18220, 18230
LC	770, 880, 920, 19920, 30060
LP	620, 730, 880, 920, 19920
05	43000, 43010, 43020, 43030, 43040, 43120, 43140, 43150, 43510
06	43050, 43060, 43090, 43110, 43130
07	43040, 43050, 43060
08	43030, 43040, 43510, 43520
09	43040, 43050, 43060
09(	43030, 43040, 43500, 43510, 43520
OE!	770, 920, 43110, 43130, 43510, 43530
OI	43040, 43060, 43090, 43100, 43120, 43140
OK!	43090, 43100, 43110, 43130
00	40075
PD\$	795, 810, 820, 830, 930
PF%	500, 840, 920

4-2-2 \$A.APCAS - Variable Cross Reference (continued)

Variable References

---

PG	30010
PN\$	19920, 19950
Q	530, 600, 19960
Q\$	530, 600, 19960
R\$	540, 550, 18200, 18210, 18220
RL\$	620, 630
SC\$	730
SD%	505, 750, 770, 41530, 43070, 43080, 43160, 43180, 43530
SK!	760, 770, 920, 40070, 43010, 43040, 43050, 43060
SK!(	40000, 43010, 43040, 43050, 43060, 43100, 43120, 43140
SN	40000, 43020, 43520
SP	760, 780, 40075, 43010, 43040, 43060
SP(	40000, 43010, 43040, 43050, 43060, 43120, 43140
WI	40010, 43070, 43150
WO	40010, 43080, 43150, 43530



4-3 \$A.APCKR - CHECK REGISTER PROGRAM

4-3-1 \$A.APCKR - Check Register Program Variable Definitions

Variable Definition

---

A\$	Invoice amount string
AA#(	Invoice amount (gross) array
AD#(	Discount amount array
AD\$(	Invoice date array
AI\$(	Invoice number array
B\$	Invoice date string
C\$	Net amount string
C\$(	Vendor name
CD\$	Check date
CN	Check number
CN\$	Check number string
F\$	Format string
F1\$	Format string
F2\$	Format string
IK	Index
NA#(	Net amount array
PG	Page
T1#-T6#	Totals
VN\$(	Voucher number array

4-3-2 \$A.APCKR - Variable Cross Reference

Variable References

#1	References
#1	220, 400, 420
\$	40000
A\$	420, 430
A\$(	400, 630, 40000
AA#(	100, 430, 700, 730
AD#(	100, 440, 710, 730
AD\$(	100, 420, 690
AI\$(	100, 420, 650, 680
B\$	420, 440
BL#	400, 739
BL\$	400
C\$	420, 450
C\$(	400, 620
CD\$	220, 320
CN	400, 610
CN\$	400
DK%	210
DP%	19980
F\$	110, 737, 738, 739, 930, 940, 950
F1\$	110, 700, 720
F2\$	110, 710
I	410, 420, 430, 440, 450, 460, 640, 650, 670, 680, 690, 700, 710, 720, 730, 40000, 40010, 40020

4-3-2 \$A.APCKR - Variable Cross Reference (continued)

Variable References

IK	40000, 40020
LC	110, 330, 600, 605, 630, 730, 739, 900, 910, 960
LP	220, 970
N8\$	210
NA#(	100, 450, 720, 730
PG	110, 320, 330
PN\$	19950
Q	19960
Q\$	200, 19960
STRING\$(	350, 734, 910
T1#	110, 730, 735, 930
T2#	110, 730, 940
T3#	110, 730, 736, 950
T4#	460, 730, 735, 737
T5#	460, 730, 738
T6#	460, 730, 736
VN\$(	100, 670, 40000, 40020
ZY\$	40000, 40020
ZZ\$(	100, 420, 40010, 40020

4-4 \$A.APCKS - PRINT PAYABLES CHECKS PROGRAM

4-4-1 \$A.APCKS - Print Payables Checks Program Variable Definitions

Variable Definition

---

AA#	Check payment amount
AA#(	Invoice amount (gross) array
AD#(	Discount amount array
AD\$(	Invoice date array
AG#	Accumulated amount due
AI\$(	Invoice number array
AMT#	Amount due less discount
AMT\$	Check payment amount
AP\$	String used to print the amount in English
BH\$	Voucher key
BP\$	String used to print the amount in English
C\$(	Vendor name array
CA#	Check payment amount
CD\$	Check written date
CE#	Credit excess
CN	Check number
D\$(	Names of the digits "ONE" to "NINE"
DSC#(	Discount amount
EN%	Flag for end of checks to be written
FA\$	Formatted string used to print totals
GR%	Flag
IN%	Flag for invoices present
J1%	Flag used to print the check stub
J2%	Flag used to print the check stub
JJ	Counter for checks written
JQ	Counter incremented as vouchers are read
LO	Temporary variable
OP\$	String used to print the amount in English
PP%	Flag
T\$(	Names of the numbers "TEN" to "NINETEEN"
TC	Total number of checks written
TE#	Total amount for checks
TH\$	"HUNDERD", "THOUSAND", "MILLION", "/100S DOLLARS", "ZERO", and "*****"
TP%	Flag
TS\$	Names of the tens numbers from "TEN" to "NINETY"
TT%	Voucher File Change Flag
U1\$-U4\$	Format strings

4-4-1 \$A.APCKS - Print Payables Checks Program Variable Definitions  
(continued)

Variable Definition

---

VN\$ Voucher keys  
WL Length of the amount less the decimal point and cents  
WS\$ String of cents from the amount  
Z1\$-Z9\$ Heading and print strings  
ZQ Index  
  
ZQ\$ Double quote character  
ZQI Equivalent to ZQ  
ZZ\$ Voucher key extension

4-4-2 \$A.APCKS - Variable Cross Reference

Variable References

-----

#5	890, 10000, 10020
A#(	25000, 25010, 25020
A\$(	1256, 1265, 10000, 18000, 18010, 18020, 18500, 18530, 22110, 25030
AA#	1240, 1250, 1255, 1262, 10000, 22010, 22100, 22130, 23170, 25020, 26040, 30000
AA#(	10020, 22000, 22090, 22500, 26022, 40000
AD#(	10020, 22000, 22090, 22500, 26022, 40000
AD\$(	10020, 22000, 22090, 22500, 22620, 26020, 40000
AG#	22010, 22100, 25000, 25010
AI\$(	10020, 22000, 22090, 22500, 22620, 26010, 26020, 40000
AMT#	22050, 22060, 22100
AMT\$	28000, 28010, 28020, 28030, 28090, 28120, 28150, 28180, 28200, 28220, 28230
AP\$	28270, 28274
B#(	22050, 22060, 22090, 22100, 30010, 30020
B\$(	18010, 18510, 22015, 22030, 22040, 22042, 22045, 22050, 22090, 22105, 22120, 30010, 30030, 30040, 30050
BH\$	22015, 22030, 30060
BP\$	28270, 28272, 28274, 28276
C\$(	1256, 10000, 22110, 22510, 22610, 23010, 23030, 23050, 23155, 23170, 24080, 24120, 24140
CA#	1255, 22510, 24070, 28000
CD\$	880, 890, 22610, 22620, 23090, 24060, 25030
CE#	30000, 30010

4-4-2 \$A.APCKS - Variable Cross Reference (continued)

Variable References

Variable	References
CN	940, 10000, 22610, 23130, 24020, 24500
D\$(	28290, 28320, 41140
DK%	870
DP%	19970, 19980
DSC#	22050, 22060, 22090
EN%	960, 22020
ER%	18520, 18540, 22020, 22042
FA\$	9140, 26040, 41060
FI%	1265, 18510, 22015, 22020, 22042, 22120
FILE%	30060
FNRO#(	22130, 40700
FNSD!(	30040
GR%	22010, 22042
I	1256, 22000, 22110, 22500, 22620, 23010, 24160, 28020, 28030, 28040, 28060, 28272, 28274, 30020, 30030, 41140, 41150, 41160, 41170
IN%	960, 22015
IP	23150
J1%	23010, 26000, 26040
J2%	23010, 26000, 26030
JJ	23010, 26010, 26020, 26022, 26024
JQ	22010, 22090, 22100, 22105, 22110, 22500
KA\$	18500, 18530
KEY\$	1265, 18510, 22042, 22120, 30010, 30060
KI	18000, 18010, 18020
LO	28270, 28272

4-4-2 \$A.APCKS - Variable Cross Reference (continued)

Variable References

LB!	940
LC	500
LP	19920, 23000, 24520
MS%	760, 24175
NI	940
N8\$	870
NA#(	10020, 22000, 22100, 22500, 26024, 40000
OP\$	28000, 28060, 28070, 28090, 28130, 28160, 28190, 28270, 28272, 28274, 28280, 28290, 28300, 28310, 28320
PN\$	19950
PP%	1252, 22010, 22045
Q	640, 720, 760, 880, 940, 19960
Q\$	600, 720, 760, 860, 920, 19960
QS	880
R\$	880, 940
RL\$	680, 740
T\$(	28280, 41150
TC	9020, 22520, 24500
TE#	1255, 9140
TH\$(	28000, 28070, 28090, 28130, 28160, 28190, 28270, 28310, 41170
TP%	1240, 22010, 22045, 23160
TS\$(	28300, 41160
TT%	1265, 22120
U1\$	24070, 41060



4-4-2 \$A.APCKS - Variable Cross Reference (continued)

Variable References

---

U2\$	41060
U3\$	26022, 26024, 41070
U4\$	26022, 41070
UB!	940
VD\$	880, 30010
VN\$(	510, 10015, 22105
WL	28220, 28230
WS\$	28000, 28030, 28040, 28050, 28060, 28090, 28120, 28130, 28150, 28160, 28180, 28190, 28230, 28240, 28250, 28280, 28290, 28300, 28310, 28320
XX#	40700
XY#	40700
YES	640, 770
Z1\$	23010, 41000
Z2\$	23070, 41010
Z3\$	23110, 41020
Z5\$	26030, 41040
Z6\$	26040, 41050
Z7\$	22510, 22610, 23155, 23170, 41080
Z8\$	22510, 22610, 23170, 41080
Z9\$	22510, 22610, 23170, 41090
ZQ	10010, 10015, 10020, 10030
ZQ\$	870, 890, 10000, 10020
ZQI	10015
ZZ\$	10015, 10020

4-5 \$A.APCRE - FILE CREATION PROGRAM

4-5-1 \$A.APCRE - File Creation Program Variable Definitions

Variable Definition

D% Disk drive number  
DISK% Disk drive number  
NA\$ File name

4-5-2 \$A.APCRE - Variable Cross Reference

Variable References

---

D%	1110, 1140, 1160, 6020, 6050
DISK%	6050
FI%	6080, 6090
LB!	1110
N!	1110
N6\$	6080
N7\$	6090
NA\$	6080, 6090
NB%	6055
NF%	6055
PN\$	19900
Q	1100, 1120, 1150, 6070
Q\$	1100, 1120, 1150, 6030, 6060
QT	1100, 1120, 1150
R\$	6070, 6080, 6090, 6100
SC\$	6010
UB!	1110
YES	1130, 1150, 6040

4-6 \$A.APDVO - DELETE VOUCHERS PROGRAM

4-6-1 \$A.APDVO - Delete Vouchers Program Variable Definitions

Variable Definition

---

B	Amount due
B#	Temporary print variable
JE	Journal entry
NL%	Flag set when a voucher is displayed for deletion
TT%	Voucher File Change Flag
U1\$	Format string
U2\$	Format string
Z6\$	Control Report heading
Z7\$	Error message
Z8\$	Control Report heading
ZA\$	Control Report heading
ZB\$	Control Report heading
ZC\$	Control Report heading
ZD\$	Control Report heading

4-6-2 \$A.APDVO - Variable Cross Reference

Variable References

-----

A#(	1695
A\$(	18000, 18010, 18020, 18500, 18530
B	22515, 22520
B#	22505, 22510, 22520, 22530, 22560, 22570, 22580, 22590
B#(	1695, 22505, 22515, 22520, 22560, 22570, 22580
B\$(	1640, 1655, 1656, 1657, 1685, 1695, 18010, 18100, 18110, 18120, 18230, 18510, 22505, 22510, 22530, 22540, 22560, 22570, 22580, 22600
DP%	19980
E%	1630, 18200, 18210, 18220
ER%	1650, 1695, 18520, 18540
FI%	1640, 1692, 1695, 18510
FNRO#(	40100
I\$	22000
IE\$(	40100
IK	18100, 18120, 18200, 18210, 18220
JE	22550, 22560, 22570, 22580, 22600, 22602
KA\$	18500, 18530
KE\$	1695
KEY\$	1640, 18510
KH\$	18110, 18120, 18210, 18230
KI	18000, 18010, 18020
KO\$	18100, 18120, 22505
KS	18220, 18230

4-6-2 \$A.APDVO - Variable Cross Reference (continued)

Variable References

LC	20500, 20530, 21000, 21020, 22010, 22200, 22500, 22555, 22602, 22610
LP	1510, 1700, 19900, 21010, 22200
NL%	1660, 22555, 22602, 22610
PC	20500, 20510, 21010, 22010
PN\$	19950
Q	1510, 1620, 1657, 1680, 2000, 19960
Q\$	1500, 1610, 1670, 2000, 19960
R\$	18200, 18210, 18220
RL	1620
SC\$	1600
TT%	1685
U1\$	22510, 22570, 22580, 22590, 40090
U2\$	22530, 40090
V\$(	500
XX#	40100
XY#	40100
YES	1510, 1680, 2010
Z6\$	1600, 20520, 40000
Z7\$	1650, 40040
Z8\$	40040
ZA\$	1660, 20530, 40060
ZB\$	1660, 20530, 40070
ZC\$	1660, 20530, 40080
ZD\$	22550, 40050

4-7 \$A.APEOP - END-OF-PERIOD PROGRAM

4-7-1 \$A.APEOP - End-of-Period Program Variable Definitions

Variable Definition

---

A#	Temporary print variable for amounts
AC(	Holds Accounts Payable credits
AN(	Account numbers.
AP#	Accounts Payable debits
AR#	Accounts Payable credits
B\$	Field variable used to set the transfer record to a null
CA#	Cash
DE#	Discount
F\$	Used to hold fielded positions in the files
J	Used to read the expense accounts
LB	Lower bound for search of the account number array AN(
MD\$	End of period date on transaction register
MX	Number of accounts found
T\$	Field variable for the first 84 positions of the Vendor File, ID, name, address, and phone
TC#	Total credits
TD#	Total debits
TF\$	General Ledger Transfer File #A.APGLT
UB	Upper bound for search of account number array AN(
VL%	Flag for scanning vouchers
VO	The voucher ID or "FINISHED"
WW	Used to sound the terminal bell
X	Account to be searched for in account number array AN(
X\$	Created voucher ID

4-7-2 \$A.APEOP - Variable Cross Reference

Variable References

---

#1	1030, 1510, 1515, 1520, 1530, 1570, 1580, 1590, 1600
A#	1550, 1570, 1580, 1590, 1600, 40010
AC(	7, 1240, 1250, 1530, 39000
AN(	7, 1230, 1240, 1250, 1530, 1540
AP#	1110, 1300, 1310, 1500, 1580
AR#	1110, 1210, 1500, 1570
B#(	1210, 1250, 1300, 1310, 39000
B\$	1515
B\$(	1200, 1210, 1220, 1300, 1305, 1310, 1400, 38100, 38110, 38120
BELL\$	1090, 1670
CA#	1110, 1300, 1310, 1500, 1590
D\$	1030, 1040, 1750, 1780
DA	1110, 1200, 1520, 1525
DE#	1110, 1310, 1500, 1600
DI%	1740
DK%	1000, 1020, 1060, 1510, 1740
DP%	19980
E%	1010, 1020, 38200, 38210, 38220
ER%	1150, 1770
F\$	1750, 1780
F2\$(	1200, 1510, 1520, 1525, 1530, 1550, 1570, 1580, 1590, 1600, 40000
FI%	1740, 1750



4-7-2 \$A.APEOP - Variable Cross Reference (continued)

Variable References

FNDI\$(	1250, 1570, 1580, 1590, 1600, 1750, 39000
FNDS\$(	1040, 1525
FNID#(	1550, 39000
FNSD!(	1110
I	1090, 1530, 1540, 1560
II	1230, 1240, 1250, 39000
IK	38100, 38120, 38200, 38210, 38220
J	1220, 1250, 1270, 39000
KH\$(	38110, 38120, 38210, 38230
KO\$(	1160, 38100, 38120
KS	38220, 38230
LB	1220, 1230, 1240, 1250
LC	8, 1530, 1630, 21030, 40020
LP	19920
MD\$(	1525, 1540, 40000
MX	6, 1200, 1220, 1240, 1500, 1520, 1527, 1530, 1640
N6\$(	1740
N9\$(	6
NA\$(	1740
PC	21005
PL	1530, 40020
PN\$(	19950

4-7-2 \$A.APEOP - Variable Cross Reference (continued)

Variable References

---

Q	1060, 1100, 1710, 19960
Q\$	8, 1060, 1100, 1710, 19960
R\$	1105, 1110, 38200, 38210, 38220
T\$	1030, 1750
TC#	1525, 1550, 1620, 40010
TD#	1525, 1550, 1620, 40010
TF\$	6, 1000, 1020, 1060, 1510
UB	1220, 1230
V\$(	1570, 1580, 1590, 1600
VD\$	1105
VL%	1120
VO\$	1150, 1160
WW	1670
X	1220, 1230, 1250
X\$	38230
YES	1060, 1720

4-8 \$A.APETV - ENTER VOUCHERS PROGRAM

4-8-1 \$A.APETV - Enter Vouchers Program Variable Definitions

Variable Definition

---

B	Amount due on the voucher
B#	Temporary print variable
BT#	Distribution totals
DV\$	Voucher date entered by the user
E1%	Error Flag if invalid entry
E2%	Error indicator
EF%	Flag to indicate a full page
EN%	Entry number
IE\$(	Holds the values entered by the user
IJ	Loop variable
J	Used to zero Vendor File fields
JE	Journal entry
JJ	Entry counter
K	Distribution counter
MN\$	Month and year that automatic vouchers are entered for
MN%	Month that automatic vouchers are entered for
RD	Set to disk space
U1\$	Format string
U2\$	Format string
Z1\$-ZE\$	Control Report headings

4-8-2 \$A.APETV - Variable Cross Reference

Variable References

---

#3	810, 840, 850, 920, 1030
A#(	1137, 1138, 4040, 4070
A\$(	1138, 4020, 4030, 4040, 4050, 4060, 18000, 18010, 18020, 18500, 18530
B	22515, 22520
B#	22506, 22510, 22520, 22530, 22560, 22570, 22580, 22590
B#(	1140, 1150, 1155, 1165, 1180, 22506, 22515, 22520, 22560, 22570, 22580
B\$(	1110, 1140, 1150, 1155, 1160, 1165, 1170, 1180, 1200, 1260, 18010, 18100, 18110, 18120, 18510, 22506, 22510, 22530, 22540, 22560, 22570, 22580, 22600
BELL\$	890
BT#	3050, 3080, 3090
DK%	570, 860, 1020, 1300
DP%	19980
DV\$	550, 560, 1138, 1140
E1%	760, 3000, 3010, 3020, 3030, 3040, 3060, 3070, 3076, 3090, 3100, 3110, 3200
E2%	780, 890, 4080
EF%	1025, 1110, 1130, 1210, 22505
EN%	570, 600, 850, 860, 920
ER%	1110, 4010, 18501, 18520, 18540
FI%	1100, 1139, 1260, 4005, 4010, 18510
FNRO#(	1155, 4070, 40100
FNSD!(	3110

4-8-2 \$A.APETV - Variable Cross Reference (continued)

Variable References

I	610, 720, 730, 740, 800, 810, 820, 830, 840, 890, 1025, 1170, 1180, 1190, 3050, 3060, 3070, 3075, 3076, 3080
I\$	22000
IE\$(	610, 620, 630, 640, 650, 655, 670, 680, 690, 700, 730, 740, 810, 830, 840, 1025, 1030, 1040, 1050, 1100, 1110, 1120, 1137, 1138, 1140, 1150, 1160, 1180, 1190, 3000, 3010, 3020, 3030, 3040, 3060, 3070, 3075, 3076, 3080, 3090, 3100, 3110, 4000, 4040, 4060, 4070, 22505, 40100
IJ	4000
IK	18100, 18120
J	1170, 1180, 1190
JE	22550, 22560, 22570, 22580, 22600, 22602
JJ	1025, 1030, 1040, 1050, 1060
K	3050, 3060, 3070, 3076
KA\$	18500, 18530
KEY\$	1100, 1137, 1260, 18510
KH\$	18110, 18120
KI	18000, 18010, 18020
KO\$	18100, 18120, 22505, 22506
LB!	660
LC	1120, 20500, 20530, 21000, 21020, 22200, 22500, 22555, 22602, 22610, 24010
LP	1010, 1270, 19900, 21010, 22200, 24000
MN\$	548, 4040
MN%	548, 780, 910, 4030, 4040

4-8-2 \$A.APETV - Variable Cross Reference (continued)

Variable References

---

MO	548
PC	20500, 20510, 21010, 22010
PN\$	19950
Q	530, 542, 548, 550, 610, 770, 870, 1010, 1320, 19960
Q\$	530, 542, 546, 550, 610, 770, 1000, 1320, 19960
QL	620, 630, 640, 650, 655, 660, 680, 690, 700, 730, 740, 750, 770, 780, 900
QS	550, 610, 750, 900
QT	610, 630, 640, 650, 655, 660, 680, 690, 700, 730, 740, 750, 900
R\$	548, 550, 560, 620, 630, 640, 650, 652, 655, 670, 680, 685, 690, 700, 730, 740
RD	860
RL	610, 710, 740, 900
RL\$	780
RS	610, 710, 740, 900
S\$	810, 840, 850, 920, 40050
SC\$	570, 780, 4000
TT%	1160, 1165
U1\$	22510, 22570, 22580, 22590, 40090
U2\$	22530, 40090
UB!	660
VD\$	560

4-8-2 \$A.APETV - Variable Cross Reference (continued)

Variable References

---

XX#	40100
XY#	40100
YES	540, 544, 1010, 1330
Z1\$	600, 40000
Z2\$	600, 40010
Z3\$	710, 40020
Z4\$	710, 40020
Z5\$	600, 40030
Z8\$	20520, 40040
Z9\$	3200, 40050
ZA\$	20530, 40060
ZB\$	20530, 40070
ZC\$	20530, 40080
ZD\$	22550, 40050
ZE\$	600, 40045

4-9 \$A.APLNK - LINKAGE FILE MAINTENANCE PROGRAM

4-9-1 \$A.APLNK - Linkage File Maintenance Program Variable Definitions

Variable Definition

---

D%	Link File disk drive number
FC%	File Creation Flag
IC\$(	Array for the parameter field types
IL(	Array for the parameter field lengths
IT\$(	Array for the parameter field names
TE	Total number of parameters
VV\$(	System parameter array



4-9-2 \$A.APLNK - Variable Cross Reference

Variable References

---

#1	4020, 4030, 5010, 5040, 5050
BT	5700
D%	1110, 1140, 1160, 4010, 5010, 5030
FC%	4010, 5722, 5732, 5743, 5752
FS	95
I	5020, 5650, 5715, 5720, 5724, 5730, 5740, 5742, 5750, 5986, 5990
IC\$(	5720, 5730, 5740, 5750, 5985, 5990
II	4020, 5010, 5040
IL(	5724, 5985, 5990
IM	100, 4030, 5050
IP	100, 4030, 5050
IT\$(	5715, 5985, 5990
LB!	1110, 5742
N!	1110
N1\$	4010, 5010, 5030
PN\$	19900
Q	1100, 1120, 1150, 2010, 5700
Q\$	1100, 1120, 1150, 2010, 4010, 4020, 4030, 5030, 5040, 5050, 5715
QT	1100, 1120, 1150, 2010, 5700
R\$	5650, 5722, 5724, 5732, 5743, 5752, 5753, 5754
RI	5700, 5799
RL\$	2010

4-9-2 \$A.APLNK - Variable Cross Reference (continued)

Variable References

---

TE	4020, 5010, 5020, 5040, 5980, 5985, 5986, 5990
UB!	1110, 5742
VV\$(	4020, 5010, 5040, 5650, 5715, 5985, 5986
W	95
WIDTH	95
YES	1130, 1150

4-10 \$A.APOPE - LIST OPEN VOUCHERS PROGRAM

4-10-1 \$A.APOPE - List Open Vouchers Program Variable Definitions

Variable	Definition
FD\$	Format string
FM\$	Format string
HV\$	Left five characters of the voucher ID
INITIAL	Flag that is true the first time through the voucher record
PG	Page counter
TA#	Total amount due
TD#	Total discount
TV	Total open vouchers

4-10-2 \$A.APOPE - Variable Cross Reference

Variable References

---

A\$(	18000, 18010, 18020, 18500, 18530
B#(	760, 775, 805
B\$(	740, 752, 754, 758, 760, 770, 773, 780, 790, 18010, 18100, 18110, 18120, 18230, 18510
DP%	19980
E%	18200, 18210, 18220
ER%	730, 18520, 18540
FD\$	500, 775, 19919
FI%	520, 18510
FM\$	500, 760, 19918
HV\$	752, 754
I1\$	1000
IK	18100, 18120, 18200, 18210, 18220
INITIAL	500, 752
KA\$	18500, 18530
KEY\$	18510
KH\$	18110, 18120, 18210, 18230
KI	18000, 18010, 18020
KO\$	758, 18100, 18120
KS	18220, 18230
LC	754, 810, 19930, 30060
LP	620, 700, 810, 19940
PG	30010

4-10-2 \$A.APOPE - Variable Cross Reference (continued)

Variable References

Variable	References
PN\$	19950
Q	600, 19960
Q\$	600, 19960
R\$	18200, 18210, 18220
RL\$	620, 630
SC\$	700
TA#	805, 19918
TD#	805, 19919
TV	800, 19915, 19920

4-11 \$A.APPAY - DETERMINE WHAT IS TO BE PAID PROGRAM

4-11-1 \$A.APPAY - Determine What is to be Paid Variable Definitions

Variable Definition

---

CA#	Cash available
CR#	Total credits
DB	Discount window beginning date
DD	Discount date
DE	Discount window ending date
DS\$	Date Selection Flag
DU	Due date
DY	Pay Program base date
FM\$	Format string
MM	Discount month
MO(	Array to hold the month of the discount date
NE	Number of vendors to be excluded
NE\$(	Vendors to be excluded
NI	Number of vendors to be included
NI\$(	Vendors to be included
P%	Check Reconciliation Print Flag
SD#	Accumulated discount
SG#	Accumulated total vouchers
T	Unique number used in converting the discount date
T#	Cash available minus the accumulated voucher amounts
TD#	Total due
TI#	Used to accumulate the amount due
TT#	Total
TT%	Voucher File Change Flag
TV#	Check total
TW#	Accumulated amount due after discount
VE	Number of vouchers to be excluded
VE\$(	Vouchers to be excluded
VI	Number of vouchers to be included
VI\$	Vendor key
VI\$(	Vouchers to be included
VO\$	Voucher ID
X\$	Voucher ID to be included or excluded
YY	Discount year

4-11-2 \$A.APPAY - Variable Cross Reference

Variable References

B#(	1165, 1190, 1230, 1240, 1510, 1520, 1580, 1640, 1650, 1710, 1806, 1807, 1808, 1809, 1820, 1840, 20080, 20100
B\$(	1133, 1135, 1140, 1150, 1160, 1165, 1180, 1190, 1210, 1220, 1230, 1240, 1510, 1520, 1570, 1580, 1640, 1650, 1700, 1710, 1801, 1805, 1806, 1807, 1808, 1810, 1820, 20015, 20070, 20080, 20090, 20100, 20110, 20120, 38100, 38110, 38120
CA#	1030, 1330, 1340
CR#	1795, 1802, 1805, 1807
D!	1070, 36050
D#	1030
D\$	1808, 1830
DB	1050, 1165, 1190, 1230, 1240, 1350, 1520, 1580, 36020
DD	1070, 36020, 36030, 36040, 36050
DE	1070, 1165, 1190, 1230, 1240, 1360, 1520, 1580
DP%	19980
DS\$	520, 1015, 1075, 1300
DU	1090, 1240, 1370
DY	1010, 1050, 1090, 1310, 21010
E%	31040, 33040, 38200, 38210, 38220
ER%	1130, 1500, 1570, 1630, 1700, 1800, 1804, 20015, 20020, 20120
FI%	40000
FM\$	1270, 1330, 1340, 1360, 1380

4-11-2 \$A.APPAY - Variable Cross Reference (continued)

Variable References

Variable	References
FNSD\$(	1050, 1070, 1090, 1310, 1350, 1360, 1370, 21010
FNSD!(	1010, 1050, 1070, 1090, 1140, 1240, 1520, 1580
I	1150, 1180, 1210, 1220, 1480, 1490, 1500, 1540, 1560, 1570, 1590, 1610, 1620, 1630, 1670, 1690, 1700, 1720, 30030, 30040, 31030, 31050, 32030, 32040, 33030, 33050
II	36030
IK	38100, 38120, 38200, 38210, 38220
KEY\$(	1490, 1500, 1570, 1620, 1630, 1700, 20010, 20015, 20020, 20120
KH\$(	38110, 38120, 38210, 38230
KO\$(	1135, 1810, 20070, 38100, 38120
KS	38220, 38230
LE!	30000
LC	1803, 1850, 1900, 21060, 40000
LP	1790, 19920
MM	36020, 36040, 36050
MO	36050
MO(	36000, 36010, 36020, 36040, 36050
NI	30010, 31010, 32010, 33010
NE	1210, 1610, 32010, 32020, 32030
NE\$(	1210, 1620, 1630, 32040, 40010
NI	1150, 1480, 30010, 30020, 30030
NI\$(	1150, 1490, 1500, 30030, 40010



4-11-2 \$A.APPAY - Variable Cross Reference (continued)

Variable References

Variable	References
P%	1795, 1800, 1801, 1805, 1806
PC	21010, 21020, 40000
PL	1850, 40000
PN\$	1770, 19950
Q	510, 1000, 1020, 1040, 1060, 1080, 1460, 1760, 1780, 19960, 20000, 20130, 30000, 30020, 31000, 31020, 32000, 32020, 33000, 33020
Q\$	510, 1000, 1020, 1040, 1060, 1080, 1460, 1760, 1780, 19960, 20000, 20130, 30000, 30030, 31000, 31030, 32000, 32030, 33000, 33030
QT	1000
R\$	1010, 1050, 1070, 1090, 1470, 1550, 1600, 1680, 1730, 1740, 20010, 30030, 32040, 38200, 38210, 38220
SC\$	1300, 1750, 20030
SD#	1770, 1808, 1890
SG#	1770, 1809, 1880
STRING\$(	1802
T	1140, 1165, 1190, 1230, 1240, 36020
T#	1340, 1350, 1360, 1370, 1380, 1808, 1830, 1840
TD#	1100, 1240, 1370, 1380
TI#	1100, 1165, 1190, 1340, 1510, 1520, 1580, 1640, 1650, 1710
TT#	1795, 1804, 1900
TT%	1101
TV#	1795, 1802, 1804, 1805, 1806, 1808

4-11-2 \$A.APPAY - Variable Cross Reference (continued)

Variable References

---

TW#	1100, 1230, 1350, 1360
UB!	30000
VD\$	1010
VE	1220, 1690, 33010, 33020, 33030
VE\$(	1220, 1700, 33050, 40010
VI	1180, 1560, 31010, 31020, 31030
VI\$	20010, 20015, 20020, 20120
VI\$(	1180, 1570, 31050, 40010
VL%	1120
VN\$	1795, 1801, 1805
VO\$	1135
X\$	31050, 33050, 38230
YES	520, 1770, 20140
YY	36020, 36030, 36050

4-12 \$A.APQUE - QUERY VENDOR PROGRAM

4-12-1 \$A.APQUE - Query Vendor Program Variable Definitions

Variable	Definition
VI\$	Vendor ID

4-12-2 \$A.APQUE - Variable Cross Reference

Variable References

---

A#(	1060, 1080, 1100, 1130, 1135, 1145
A\$(	1060, 1070, 1080, 1090, 1100, 1110, 1135, 1140, 1145, 21040, 21060
A2\$(	1120
B#(	1230, 1250
B\$(	1165, 1220, 1230, 1240, 1250, 1260, 1270, 38100, 38110, 38120, 38160
DP%	19980
E%	38130, 38140, 38150
ER%	1020, 1165, 1170, 1270
F1\$(	1120
FI%	1010, 1160
IK	38100, 38120, 38130, 38140, 38150
KEY\$(	1010, 1160, 1165, 1170, 1270
KH\$(	38110, 38120, 38140, 38160
KO\$(	1220, 38100, 38120
KS	38150, 38160
LC	1150, 1170, 1215, 1265, 1290, 21000, 40000
LP	1040, 1045, 1275, 19920
PC	21020, 40000
PL	40000
PN\$(	19950
Q	1000, 1030, 1280, 19960, 40020
Q\$(	1000, 1030, 1280, 19960, 40010

4-12-2 \$A.APQUE - Variable Cross Reference (continued)

Variable References

R\$ 1010, 1020, 1040, 38130, 38140, 38150

VI\$ 1010, 1160, 1165, 1170, 1270

YES 1290

4-13 \$A.APSYS - SYSTEM PARAMETER FILE MAINTENANCE PROGRAM

4-13-1 \$A.APSYS - System Parameter File Maintenance Program Variable  
Definitions

Variable Definition

---

D%	Disk drive number
FC%	File Create Flag
IC\$(	Array for the parameter field types
IL(	Array for the parameter field lengths
IT\$(	Array for the parameter field names
TE	Total number of parameters
VV\$(	System parameter array

4-13-2 \$A.APSYS - Variable Cross Reference

Variable References

Variable	References
#1	4010, 4020, 5010, 5030, 5040
BT	5700
D%	1110, 1140, 1160, 4010, 5010, 5030
FC%	4010, 5722, 5732, 5743, 5752
FS	95
I	5020, 5650, 5715, 5720, 5723, 5724, 5730, 5740, 5742, 5750, 5986, 5990
IC\$(	5720, 5730, 5740, 5750, 5985, 5990
II	4020, 5010, 5040
IL(	5724, 5985, 5990
IT\$(	5715, 5985, 5990
LB!	1110, 5742
N!	1110
N\$	5010
N2\$	4010, 5010, 5030
PN\$	19900
Q	1100, 1120, 1150, 2010, 5700
Q\$	1100, 1120, 1150, 2010, 4010, 4020, 5030, 5040, 5715
QT	1100, 1120, 1150, 2010, 5700
R\$	5650, 5722, 5724, 5732, 5743, 5752, 5753, 5754, 10000, 10010, 10020
RI	5700, 5799
RL\$	2010
TE	4010, 4020, 5010, 5020, 5030, 5040, 5980, 5985, 5986, 5990

4-13-2 \$A.APSYS - Variable Cross Reference (continued)

Variable References

-----

UB!	1110, 5742
VV\$(	4020, 5010, 5040, 5650, 5715, 5985, 5986
W	95
WIDTH	95
YES	1130, 1150



4-14 \$A.APVFL - VENDOR FILE LIST PROGRAM

4-14-1 \$A.APVFL - Vendor File List Program Variable Definitions

Variable Definition

---

LA	Flag is true if Monthly Entry Flag is Y.
LS	Flag is true if only selected vouchers are to be listed.
PF%	Flag is true if the phone number has seven digits.
U1\$	Format string
Z1\$-ZB\$	Vendor File list headings

4-14-2 \$A.APVFL - Variable Cross Reference

Variable References

Variable	References
A#(	20020, 20040, 20070, 20090, 20092, 20096
A\$(	20005, 20010, 20025, 20030, 20050, 20060, 20082, 20083, 20084, 20092, 20094, 20096
A1\$	20083, 20084, 20086, 20090
DP%	19980
ER%	680, 685, 790
FI%	670, 780
KEY\$	780
LA	20005, 20025, 20050, 20080, 20092, 20096
LC	510, 20003, 20100, 20520, 21000, 21010
LP	510, 550, 566, 645, 800, 840, 19910, 20000, 21010
LS	510, 630, 650
PC	510, 20500, 20510
PF%	20082, 20086
PL	20003, 40000
PN\$	19950
Q	540, 565, 620, 760, 820, 19960
Q\$	530, 565, 610, 750, 810, 19960
QT	540, 620
R\$	760, 770, 780
RL\$	550, 560, 630, 640
SC\$	645, 830
U1\$	20020, 20040, 20070, 20090, 20092, 20096, 40070

4-14-2 \$A.APVFL - Variable Cross Reference (continued)

Variable References

---

YES	830
Z1\$	40020
Z2\$	800, 20510, 40030
Z3\$	800, 20510, 40040
Z4\$	20080, 40050
Z5\$	20010, 40060
Z6\$	20030, 40060
Z7\$	20060, 40060
Z8\$	20025, 40070
Z9\$	20094, 40060
ZA\$	20050, 40070
ZB\$	20090, 40070

4-15 \$A.APVFM - VENDOR FILE MAINTENANCE PROGRAM

4-15-1 \$A.APVFM - Vendor File Maintenance Program Variable Definitions

Variable Definition

---

C\$(	Prompt messages
CE\$	Prompt message 'enter'
CV\$	Prompt message 'current value'
FC	Function code
ME\$	Auto Voucher Y-N Flag status change variable
NI	Number of field to be changed
U1\$	Format string for the Vendor File
U3\$	Format string

4-15-2 \$A.APVFM - Variable Cross Reference

Variable References

A#(	20010, 30510, 30620, 30710, 30810, 31310, 31510, 37050, 37063, 37066
A\$(	1040, 1131, 1230, 1240, 2050, 2142, 3050, 20000, 20010, 30020, 30120, 30220, 30320, 30410, 30920, 31020, 31120, 31210, 31410, 31610, 37040, 37060, 37061, 37062, 37064, 37067
B\$(	3340
BELL\$	2120, 3340
C\$(	30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 31000, 31100, 31200, 31300, 31400, 31500, 31600, 37040, 37050, 37060, 37062, 37063, 37064, 37066, 37067, 40000, 40010, 40020, 40030, 40040, 40050, 40060, 40070, 40080, 40090, 40100, 40110, 40120, 40130, 40140, 40150, 40160, 40170
CE\$	30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 31000, 31100, 31200, 31300, 31400, 31500, 31600, 40190
CV\$	37040, 37050, 37060, 37062, 37063, 37064, 37066, 37067, 40190
D#	30510, 30620, 30710, 30810, 31305, 31310, 31505, 31510
DP%	19980
E%	3070, 3320, 3330, 3360
ER%	1050, 2060, 3060, 3300, 3320
FC	910, 1000, 2000, 2185, 3000
FI%	1040, 1240, 2050, 2190, 3050, 3140, 3300
FNRO#(	40350
I	37040, 37050, 37060, 37062, 37070
KEY\$	1040, 1240, 2050, 3050, 3140, 3300

4-15-2 \$A.APVFM - Variable Cross Reference (continued)

Variable References

KY\$(	3140, 3300, 3330
LB!	2110, 31100, 31600
ME\$	20000
NI	2110
NI	2110, 2120, 2140, 2141, 2144
PN\$	19950
Q	870, 900, 930, 1200, 2110, 2150, 3100, 19960, 30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 31000, 31100, 31200, 31300, 31400, 31500, 31600
Q\$	860, 920, 1190, 2100, 2150, 3090, 19960, 30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 31000, 31100, 31200, 31300, 31400, 31500, 31600
QT	1200
R\$	30010, 30015, 30020, 30110, 30120, 30210, 30220, 30310, 30320, 30401, 30405, 30410, 30920, 31010, 31020, 31120, 31205, 31206, 31210, 31405, 31406, 31410, 31610
RL	30401, 30405, 31205, 31405
RL\$	940, 950, 960, 965
SC\$	1000, 2000, 2145, 3000
U1\$	37050, 37063, 37066, 40200
U3\$	40200
UB!	2110, 31100, 31600
XX#	40350
XY#	40350
YES	870, 1210, 2170, 3110

4-16 AP MENU - MENU PROGRAM

4-16-1 AP MENU - Menu Program Variable Definitions

Variable Definition

---

M\$	Description of P\$
M\$(	Menu
MM\$	NM-1
NM	Used to read the Submenu
NM\$	Holds the Submenu selection
P\$(	Holds the Submenu selection
PP\$	Menu headings (holds PN\$); indicates Menu subsection start
RA	Flag
TP\$	Menu selected

4-16-2 AP MENU - Variable Cross Reference

Variable References

---

#1	2010
DK%	2010
DP%	1014, 1058, 1105, 1106, 1108, 1110, 1120, 1130, 1135, 1160, 1164, 1166, 1168, 1170, 1180, 2000
I	1014, 1056, 1058, 1060, 1086, 1089, 1092, 1105, 1106, 1108, 1110, 1120, 1130, 1135, 1160, 1164, 1166, 1168, 1170, 1180, 1198, 2122, 2226
IM	320, 330, 1058, 1062, 1089, 1095, 2010
IP	1089, 2010
M\$	2118
M\$(	2120, 2122, 2226
MM\$	2116, 2124
N1\$	2000
NM	1014, 1056, 1086, 2116, 2120, 2122, 2226
NM\$	2116
P\$	2118
P\$(	1014, 1058, 1089, 2120, 2122, 2226
PN\$	2108, 19950
PP\$	330, 1050, 1080, 2108, 2114
Q	1010, 1054, 1082, 1900
Q\$	1000, 1052, 1082, 1900, 2000, 2010
QT	1010, 1054, 1083, 1900
R\$	1012, 1013, 1014, 1058, 1062, 1089, 1095, 1920



4-16-2 AP MENU - Variable Cross Reference (continued)

Variable References

Variable	References
RA	2118, 2120
RL	1910
SET	19980
TP\$	2114
VD\$	1920, 2010
VT\$	1080, 1082, 1100

4-17 COMMON SUBROUTINES

4-17-1 Common Variable Definitions

Variable Definition

---

A#( Array for Vendor File numerical data  
A\$( Array for Voucher File numerical data  
A1\$ Vendor's area code  
A2\$ Vendor's telephone number  
B#( Array for Voucher File numerical data  
  
B\$( Array for voucher string data  
BE\$ Terminal bell (equivalent to BELL\$)  
CH Input character  
D! Dummy parameter for FNDS\$, also used to hold a date  
D# Dummy parameter for FNDI\$, also used to hold dollar value  
returned by Subroutine Querydollar.  
  
D\$ Dummy field variable  
DA Day returned by the Querydate Subroutine  
DG Flag for numerical input check  
DI% Main data disk drive number  
DK% Main data disk drive number  
  
DP Flag for decimal point input  
DP% Program disk drive number  
E% Error indicator  
E\$ End  
ER% Error indicator from ISAM call  
  
F1\$( Field string array for the Vendor File  
F2\$( Field string array for the Voucher File  
FI% ISAM file number  
FNDI\$( Pack dollar amount function  
FNDS\$( Unpack a date function  
  
FNID#( Unpack a dollar amount function  
FNRO# Round off function  
FNSD!( Pack a date function  
FO% ISAM File Open Flag  
FS Maximum query input field size  
  
HB\$ Help File field buffer  
HF% Help File number  
HJ Index for the Help File directory lower message  
HK Index for the Help File directory upper message  
HL Record separator (RS = CHR\$(30)) position  
  
HN\$ Name of array to be ERASEd  
HN\$( Message number string array

4-17-1 Common Variable Definitions (continued)

Variable	Definition
HN(	Message number array
HP	Index for binary search
HS	Starting record number
HS\$	Fielded variable for HS(
HS\$(	Message record start/length string array
HS(	Message record start/length array
I	Index
I1\$	Input string
I\$	Dummy parameter for FNID#
II	Index
IM	Menu/Submenu pointer
IP	Program selection pointer
JJ	Index
KA\$	Highest voucher number
KE\$	Current ISAM record key (equivalent to KEY\$)
KH\$	Used to hold created voucher ID
KI	Highest voucher number + 1
KO\$	Voucher ID
KS	Sequence number used in voucher number extension
KY\$(	Key array
LB!	Lower bound for N! in Subroutine Querynumber
LC	Line counter
LP	Set Printer On Flag
MO	Month entered in Querydate Subroutine
N!	Value returned by Querynumber Subroutine
N#	Used in FNDI\$
N\$	Input value for SYSTEM File
N1\$	System Linkage File Name "#A.APLNK"
N2\$	System Parameter File Name "#A.APSYS"
N3\$	System Linkage File Maintenance Program Name "\$A.APLNK"
N4\$	System Parameter File Maintenance Program Name "\$A.APSYS"
N5\$	System Help File Name "#A.APHLP"
N6\$	Vendor File Name "#A.APVEN"
N7\$	Voucher File Name "#A.APVOC"
N8\$	Check Register Data Name "#A.APGLT"
N9\$	General Ledger Transfer File Name "#A.APGLT"
NA\$	Name of file to be opened
NB%	Number of ISAM virtual I/O buffers
NF%	Maximum number of concurrently open ISAM files
P\$	Input variable for System Linkage File

4-17-1 Common Variable Definitions (continued)

Variable Definition

PN\$	Program title
Q	Help File message number
Q\$	Query prompt message
QL	Query field size
QS	End Print Line In Query Flag
QT	Number of TABs to print before Q\$
R\$	User response returned by Subroutine Query
RL	Length of user response string R\$
RL\$	Leftmost character of user response string R\$
S\$	Dummy parameter for FN\$D!
SC\$	Clear screen code
T\$	Help File message string
UB!	Upper bound for N! in Subroutine Querynumber
V\$(	System parameter array
VC\$	Company name
VD\$	Current system date
VS\$	System name
VT\$	Disk type
W	Terminal width
WIDTH	Terminal width
XX#	Dummy parameter for FNRO#
XY#	100# for FNRO#
YES	Parameter returned by Queryyesno Subroutine
YR	Year entered in Querydate Subroutine

4-17-2 Common - Variable Cross Reference

Variable References

Variable	References
#1	50002, 50004, 50020
#HF%	59120, 59210, 59230, 59240
A#(	46040, 46060, 46065, 47530, 47560, 48500
A\$(	46020, 46036, 46050, 46060, 46065, 47510, 47520, 47540, 47550, 48500
A1\$	46030, 46035, 46036
A2\$	46030, 46035, 46036
B#(	46070, 46080, 47570, 47580, 48500
B\$(	18100, 18110, 18120, 46070, 46080, 46090, 46100, 47570, 47580, 47590, 47600, 48500
BE\$	50000, 50200, 50300, 54100, 54200, 54300, 54530
BELL\$	54000
CH	51240, 51250, 51260, 51270, 51660, 51670, 51680, 51690
DI	50175
D#	50160, 51655, 51710
D\$	48520, 48540
DA	51400, 51424, 51426, 51430, 51440
DG	51200, 51250, 51280, 51600, 51670, 51700
DI%	48100, 48110
DK%	48100, 48110, 50002, 50004
DP	51200, 51260, 51600, 51680
DP%	1, 50000, 50210, 50310, 59200
E\$	51200

4-17-2 Common - Variable Cross Reference (continued)

Variable References

Variable	References
ER%	46010, 54050, 54100
F1\$(	46020, 46030, 46035, 46040, 46050, 46060, 46065, 47510, 47520, 47530, 47540, 47550, 47560, 48500, 48510, 48520
F2\$(	46070, 46080, 46090, 46100, 47570, 47580, 47590, 47600, 48500, 48530, 48540
FI%	46015, 47000, 47500, 48100, 48110, 49000
FNDI\$(	47520, 47530, 47560, 47570, 47580, 50160
FNDS\$(	46050, 46070, 46080, 46090, 50175
FNID#(	46030, 46040, 46060, 46065, 46070, 46080, 50165
FNSD!(	47540, 47570, 47580, 47590, 47600, 50170
FO%	48110, 49000
FS	50056, 51010
HB\$(	59120, 59210
HF%	59200
HJ	59000, 59080, 59090, 59110, 59120, 59240, 59250
HK	59000, 59080, 59100, 59120, 59150, 59230, 59240, 59250
HL	59130, 59140
HN\$(	59250
HN\$(	59200, 59230, 59250
HN(	59090, 59100, 59200, 59250
HP	59080, 59090, 59100, 59110, 59240, 59250
HS	59110, 59120

4-17-2 Common - Variable Cross Reference (continued)

Variable References

---

HS\$	59250
HS\$(	59200, 59230, 59250
HS(	59000, 59110, 59200, 59250
I	46020, 46040, 47510, 47530, 49000, 50020, 54530
I\$	50165
II	51030
IK	18100, 18120
IM	50002
IP	50002
JJ	51240, 51270, 51280, 51640, 51660, 51690, 51700
KH\$	18110, 18120
KO\$	18100, 18120
KY\$(	46020, 46070, 47510, 47570, 48500, 48510, 48530
LB!	51290
LP	50900
MO	51400, 51422, 51430, 51440
N!	51200, 51290
N#	50160, 50165
N\$	50004, 50020
N1\$	2, 50000
N2\$	2, 50004
N3\$	2, 50210

4-17-2 Common - Variable Cross Reference (continued)

Variable References

N4\$	2, 50310
N5\$	2, 59200
N6\$	5, 48100
N7\$	5, 48110
N8\$	5
N9\$	5
NA\$	48100, 48110
NB%	48000
NF%	48000
P\$	50002
PN\$	3, 50910
Q	51070, 59080, 59090, 59100
Q\$	51000, 51800
QS	51012
QT	51000
R\$	51010, 51015, 51020, 51030, 51200, 51220, 51230, 51240, 51290, 51400, 51420, 51422, 51424, 51426, 51430, 51620, 51640, 51650, 51655, 51660, 51710
RL	51015, 51030
RL\$	51015, 51020, 51426, 51805, 51810
S\$	50170
SC\$	50055, 50900
SET	1
T\$	59110, 59120, 59130, 59140, 59230



4-17-2 Common - Variable Cross Reference (continued)

Variable References

---

UB!	51290
V\$(	50020, 50050
VC\$	50050, 50905
VD\$	50002, 50910
VS\$	50050, 50905
VT\$	50050
W	50050, 50905, 50910
WIDTH	50050
YES	51805
YR	51400, 51430, 51440

4-17-5 Common - Variable Cross References (continued)

Variable	Reference
BS1	51250
V41	50050, 50055
V42	50050, 50055
V43	50050, 50055
V44	50050, 50055
V45	50050, 50055
V46	50050
V47	50050, 50055, 50060
W	50050
WIDTH	50050
Z80	51550
Z8	51450, 51455, 51460

APPENDIX A

FLOPPY DISK TO HARD DISK CONVERSION

The following procedure converts accounting packages from a floppy disk operating system to a hard disk operating system on the PCC 2000. A hard disk drive has up to four platters as in the D3462 hard disk drive which has three fixed platters and one removable platter. A unit consists of up to three platters. In a D3462 disk drive, three fixed platters are in one unit and one removable platter is another unit. The two storage systems are compared below.

Floppy Disk Operating System	Hard Disk Operating System
The maximum non-volatile storage on two floppy disk drives is 1M byte.	The maximum non-volatile storage on two floppy disk drives and four hard disk drives is 81M bytes.
The operating system occupies 33.8K RAM bytes, leaving 30.2K RAM bytes for user programs.	An operating system, with two floppy disk and two hard disk drives, occupies 35.3K RAM bytes, leaving 29.41K RAM bytes for user programs.*
Each floppy drive requires 568 RAM bytes at system initialization.	Each drive requires 617 RAM bytes at system initialization.

\*The maximum hard disk system, consisting of two floppy disk drives and four hard disk drives, occupies 36.5K RAM bytes.

Convert a floppy disk operating system to a hard disk operating system using the following steps.

1. Copy the original distribution diskettes before using them.
2. Initialize and format the hard disk units using the utilities floppy diskette. Refer to the PCC 2000 Utility Program Specification under INIT.
3. Load the Hard Disk Operating System from the floppy diskette in drive 0. Configure the system for the hardware available and save the system image on the diskette in drive 0.

4. Start the system, insert the source diskette for the accounting system in disk drive number one, and mount all units. Individually, load each source diskette program and save it on the unit designated for the accounting system. This tedious operation will be improved using the BACKUP program that is being developed for the utility diskette.
5. Transfer all random files using the source diskette program \$U.COPYR. Transfer all sequential files using the source diskette program \$U.COPYS.
6. Modify all programs for the new system unit. Check the main menu program thoroughly and modify all its drive specification statements. Modify all other programs using a merge file since these programs have similar modifications.
7. Correct the data file drive number using the linkage program \$A.XXLNK. Correct the disk type using the system parameter program \$A.XXSYS.
8. Correct the ISAM routine line number 60610 to "IFVT\$="H"THENOD(0)=39062 ELSEIFVT\$="F"THENOD(0)=3476"
9. Test the system thoroughly with a large data base if it is available.

The size of the hard disk operating system may cause an error 7 (out of memory) or an error 14 (out of string space). Run the tests above on any memory or string space sensitive programs. If error 7 occurs, modify the DIMENSION statement with a smaller number. If error 14 occurs, modify the CLEAR statement with a larger number; and if necessary, modify the DIMENSION statement with a smaller number.

10. The "UTILITY" routines FORMAT, COPYH, and DCOPY are not on the diskettes distributed with the PCC 2000 applications software, so the hard disk utilities diskette must be used to initialize, format, and copy the hard disks. Refer to the PCC 2000 UTILITY PROGRAM SPECIFICATION document for the detailed description of the utility programs.