PCC 2000 INVENTORY MANAGEMENT SYSTEM

PROGRAM DOCUMENTATION

FEBRUARY 1980

United States and Canada

Pertec Computer Corporation
Computer Systems Division
20630 Nordhoff Street
Chatsworth, California 91311, U.S.A.
Phone (213) 998-1800
TWX (910) 494-2788

International

Pertec Computer Corporation
Business Systems Division
17332 Von Karman Avenue
Irvine, California 92714, U.S.A.
Phone (714) 540-8340
TWX (910) 595-1912

Printed in U.S.A. Publication No. 680506A c1980, Pertec Computer Corp.

CHANGE RECORD

Revision	Date	Pages Affected
A	2/80	Initial Release

FOREWORD

This document provides detailed information regarding accounting software for the PCC 2000, BASIC 2000-1-H. This information enables a customizing of software for a user's application. Although it is written for the PCC 2000 accounting software, most of it also applies to the accounting software for the MITS 300, BASIC.

This document is divided into three sections:

Section 1, System Documentation, describes the data structures, design constraints, and routines common to all the accounting software packages. The section is divided into the following subsections:

- System flowchart (program names and file names)
- File structures
- Data file layouts and field explanations
- Limitations and restrictions
- Common routines (code breakdown and functional description)

Section 2, Program Documentation, covers the eight programs that are unique in the Inventory Management System. Each program documentation has three subsections:

- Data files (for input or output)
- Functional description (of each program)
- Code breakdown (with functional description)

Section 3, Sorted Cross-Reference and Variable Definition, lists and defines all variables used for the programs covered in Section 2.

This document should be used in conjunction with the PCC 2000 Inventory Management Software User's Manual (document number 248102).

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.

TABLE OF CONTENTS

1. SYSTEM DOCUMENTATION

1-1 System Flowchart 2
1-2 File Structures 3
1-3 Data File Layouts and Field Explanations 3
1-4 Restrictions and Limitations 7
1-5 Common Routines 7

2. PROGRAM DOCUMENTATION

2-1 IM MENU - Main Menu Selection 10
2-2 $INV.IFM - File Maintenance 10
2-3 $INV.IU - Update 11
2-4 $INV.POS - Point of Sales 12
2-5 $INV.RG - Report Generation 13
2-6 $INV.SYS - System Parameter Set up 14
2-7 $INV.LNK - Data Disk Linkage 15
2-8 $INV.CRE - Data File Creation 16

3. SORTED CROSS-REFERENCE AND VARIABLE DEFINITION

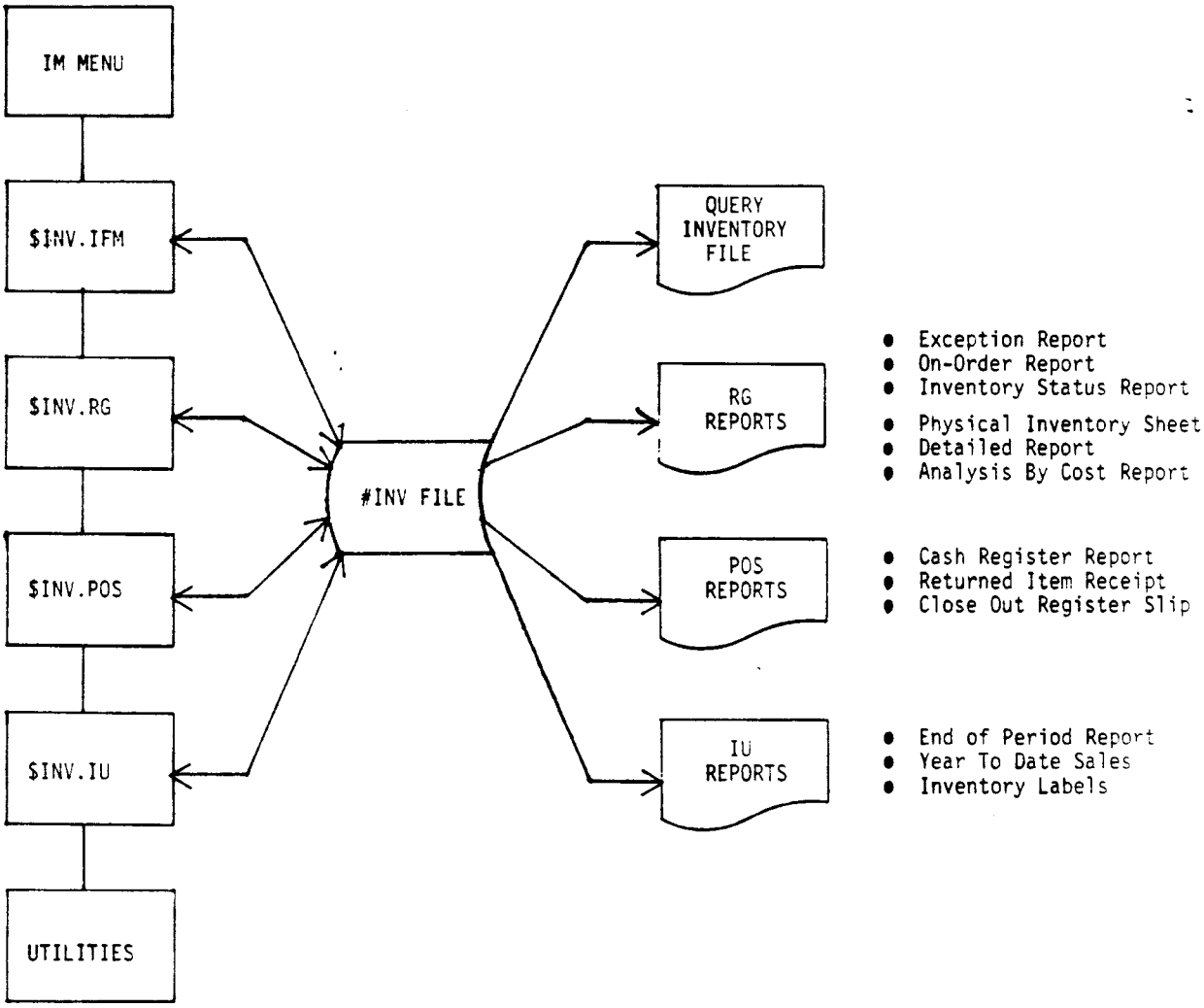
3-1 IM MENU 18
3-2 $INV.IFM 20
3-3 $INV.IU 24
3-4 $INV.POS 30
3-5 $INV.RG 36
3-6 $INV.SYS 43
3-7 $INV.LNK 46
3-8 $INV.CRE 49
3-9 Common Routine 46000-49999 52
3-10 Common Routine 50000-59999 55

APPENDIX A Floppy Disk to Hard Disk Conversion A-1

SECTION 1

SYSTEM DOCUMENTATION

1-1 SYSTEM FLOWCHART



1-2 FILE STRUCTURES

The Inventory Management System creates and maintains the ISAM data file #INVFILE. This file contains all the information for the Inventory Management System. This information includes 24 fields for each item stored in a single record. Like the other accounting software, the Inventory Management System maintains the #INV.SYS - System Parameter File, #INV.LNK - System Data Linkage File, and #INV.HLP - Help Message File. These files identify the Inventory Management System, link to data diskettes, and print out help messages when requested. Although these files are a part of the system, they are only used for the functions described above.

1-3 DATA FILE LAYOUTS AND FIELD EXPLANATIONS

These four data files are used in the Inventory Management System:

SECTION	NAME	TYPE	DESCRIPTION
1-3-1	#INVFILE	ISAM random	Inventory Data File - item key, description, average cost, etc.
1-3-2	#INV.LNK	sequential	Data Disk Linkage File
1-3-3	#INV.SYS	sequential	System Parameter File (Aside from their own update programs, #INV.LNK and #INV.SYS are accessed in all programs.)
	#INV.HLP	random	Help Message File

This document covers all files but the #INV.HLP File.

1-3-1 #INVFILE - Inventory Data File

The Inventory Data File contains all the information used in the Inventory Management System. It is an ISAM file that is partitioned into the following fields:

FIELD NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Item description	24	FB$(1)
2	Item units	6	FB$(2)
3	Average cost	4	FB$(3)
4	Current price	4	FB$(4)
5	YTD sales	4	FB$(5)
6	Previous balance	4	FB$(6)
7	Date of previous balance	4	FB$(7)
8	Number of sales	4	FB$(8)
9	Number of adjustments	4	FB$(9)
10	Number of receipts	4	FB$(10)
11	Number on order	4	FB$(11)
12	Date order placed	4	FB$(12)
13	Reorder level	4	FB$(13)
14	Reorder quantity	4	FB$(14)
15	Lead time (days)	4	FB$(15)
16	Minimum balance	4	FB$(16)
17	Maximum balance	4	FB$(17)
18	Date of last sale	4	FB$(18)
19	Date of last physical inventory	4	FB$(19)
20	YTD sold	4	FB$(20)
21	Vendor ID	8	FB$(21)
22	Vendor item number	14	FB$(22)
23	Location of item	4	FB$(23)
	Total	128	Bytes

1-3-1 #INVFILE - Inventory Data File (continued)

Explanations of the fields in the data records are provided below.

Field 1 Item Description	Up to 24 alphanumeric characters describe the item.
Field 2 Item Units	Units in which the item is accounted (i.e., lb., kg., etc.)
Field 3 Average Cost	Seller's cost per unit in dollars
Field 4 Current Price	Current price of the item to the buyer in dollars
Field 5 YTD Sales	Total sales for the item for the current year in dollars
Field 6 Previous Balance	Number of units of the item in stock at the end the last accounting period
Field 7 Previous Balance Date	Date when the last period ended (Refer to paragraph 1-5-2.)
Field 8 Number of Sales	Number of units sold since the last period ended
Field 9 Number of Returns	Number of units returned since the last period ended
Field 10 Number of Receipts	Number of units received from the vendor since the last period ended
Field 11 Number on Order	Number of units still on order
Field 12 Date Order Placed	Date when the last order was placed
Field 13 Reorder Level	Number of units in which to order more stock
Field 14 Reorder Quantity	Number of units to order for stock
Field 15 Lead Time in Days	Time in days between the order and delivery of the units
Field 16 Minimum Balance	Mimimum number of units in stock

1-3-1 #INVFILE - Inventory Data File (continued)

Field explanations (continued)

Field 17 Maximum Balance	Maximum number of units in stock
Field 18 Date of Last Sale	Date the last sale was made
Field 19 Date of Last Physical Inventory	Date the last physical inventory was made
Field 20 YTD Sold	Number of units sold this year
Field 21 Vendor ID	Abbreviated vendor name
Field 22 Vendor Item Number	Fourteen alphanumeric characters identify the item key and the vendor's stock number.
Field 23 Location of Item	Place the item is stored

1-3-2 #INV.SYS - System Parameter File

FIELD NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	System name	24	VV$(1)
2	Diskette title/version	24	VV$(2)
3	Creation date	8	VV$(3)
4	Disk type code	1	VV$(4)
5	Company name	24	VV$(5)
6	Address 1	24	VV$(6)
7	Address 2	24	VV$(7)
8	GL present ? (Y or N)	1	VV$(8)

1-3-3 #INV.LNK - Data Disk Linkage File

FIELD NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Disk drive number (data)	1	DK% VV$(1)
2	Current date	8	VD$ VV$(2)
3	Menu pointer	1	IM
4	Program pointer	1	IP

1-4 RESTRICTIONS AND LIMITATIONS

The restrictions and limitations of the Inventory Management System are listed below.

- The Inventory Management System has a limited ability of point of sale.
- The number of items is limited by the capacity of the disk.
- The data base is independent of the General Ledger System.
- Analysis By Cost (ABC) requires disk storage space for its Temporary Work File and leaves only half of the disk's storage space for Inventory Data Files.
- For hardware restrictions and limitations, refer to the PCC 2000 Inventory Management Software User's Manual (page 1-7 of document number 248102).

1-5 COMMON ROUTINES

1-5-1 Common Routines for Inventory Management System (46000-49999)

LINE NUMBER	DESCRIPTION
46000-46060	Routine that converts the date to the absolute date
47000-47003	Prompt for "READY?". If yes, continue; otherwise, prompt for "READY?" again.
48000-48110	Routine to pack the entries of: A-alphanumeric, N-numeric, D-date, or a dollar amount
49000-49035	Routine to unpack the 48000-48110 entries and print them on a report

1-5-2 Routines Common To All Accounting Systems (50000-59999, 65520-65529)

LINE NUMBER	DESCRIPTION
50000-50899	PROGRAM SET UP reads in run-time parameters, sets up basic functions, and opens the Help File.
50900-50999	PRINT HEADING
51000-51099	ALPHANUMERIC STRING INPUT ROUTINE prohibits double quotes and accesses the Help File when "?" is entered.
51200-51399	NUMERIC INPUT allows all digits, one decimal point, and a "+" or "-". Also, it determines whether the input is between preset, upper and lower bounds.
51400-51499	DATE INPUT (MM/DD/YY) requires that the month, day, and year be within the ranges of 1 to 12, 1 to 31, and 10 to 99, respectively.
51600-51799	DOLLARS AND CENTS INPUT ROUTINE edits out "$", and allows all digits, one decimal point, and a "+" or "-".
51800-51999	YES/NO INPUT ROUTINE adds "(Y/N)?" to the prompt. If response is Y, set YES Flag to -1; if response is N, set YES Flag to 0.
52000-52099	CRT OUTPUT ROUTINE clears the screen, and prints out the message "WORKING ON: ".
54000	INVALID ENTRY ERROR ROUTINE
54100-54110	SEVERE SYSTEM ERROR ROUTINE
54200	NUMBER OUT OF RANGE ERROR ROUTINE
54300	INCORRECT DATE ERROR ROUTINE
54500-54599	BASIC ERROR ROUTINE
55000-55099	PACK ROUTINE packs the most significant digits into an unprintable string (P$=key+4 byte unique incremental variable) and pads the left of the string to original length. It insures a unique key for an ISAM file entry.
55100-55199	UNPACK ROUTINE unpacks string from 55000 routine.
59000-59999	HELP FILE LOOKUP prints a help message.
65520	SEND ALL OUTPUT TO PRINTER
65525	SEND ALL OUTPUT TO CRT
65528	INITIALIZE PRINTER sets logical page length equal to the physical page length.
65529	SET PAPER TO TOP OF PAGE

SECTION 2

PROGRAM DOCUMENTATION

2-1 IM MENU - MAIN MENU SELECTION

2-1-1 IM MENU Data Files

#INV.SYS, #INV.LNK

2-1-2 IM MENU Functional Description

IM MENU displays main menu selections, displays utility menu selections for hard and floppy disks, links the data disk to the system, and runs the selected program.

2-1-3 IM MENU Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00300-00320	Set up menu selection array.
01100-01300	After a selection is made from the master activity menu, run the appropriate program.
01500-01780	After a selection is made from the hard disk utility menu, run the appropriate hard disk program.
01800-01920	After a selection is made from the floppy disk utility menu, run the appropriate floppy disk utility program.
02000-02020	Open, read, and close the Linkage File #INV.LNK.
19900-19930	Exit routine.

2-2 $INV.IFM - FILE MAINTENANCE

2-2-1 $INV.IFM Data Files

#INVFILE

2-2-2 $INV.IFM Functional description

$INV.IFM builds and maintains the Inventory Data File #INVFILE.

2-2-3 $INV.IFM Code breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
10000-10310	Initialize, read in data field names and mnemonics for the type of field data, and establish record's field.

2-2-3 $INV.IFM Code breakdown (continued)

LINE NUMBER	DESCRIPTION
11000-11190	Print menu, accept selection, and branch to the subroutine appropriate to the selection.
19900-19950	Exit routine to the main menu.
21000-21190	Query #INVFILE and print the record selected.
23000-23320	Add record to the #INVFILE and modify the record to be added.
24000-24160	Delete the record in the #INVFILE.
25000-25540	Modify the record in the #INVFILE.
38000	Establish the field and read the header record.
38100	Establish the field and write the header record.
38200	Establish the field for the header record.

2-3 $INV.IU - UPDATE

2-3-1 $INV.IU Data Files

#INVFILE

2-3-2 $INV.IU Functional description

$INV.IU allows batch updating of the Inventory Files Data Base. With the QF and END Programs, the Inventory Update Program contains four other programs: UP - Update Inventory, INP - Initialize New Period, YTD - Year-To-Date Sales, and LAB - Label for Inventory items.

2-3-3 $INV.IU Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
10000-10310	Initialize, read in data field names and mnemonics of types of field data, and establish the field for the record.
11000-11180	Print IU menu and jump to the selected subroutines.
19900-19950	Exit routine to the main menu.
21000-21190	Query #INVFILE and print the record selected.
22000-22450	Update the #INVFILE by prompting old entries and accepting new entries.

2-3-3 $INV.IU Code Breakdown (continued)

LINE NUMBER	DESCRIPTION
23000-23380	New period initialization resets all quantites to their start of period values and sets the previous balance to the current balance. YTD sales and totals are set to zero if the period terminates the year.
25000-25180	Print a YTD Report.
26000-26170	Generate the labels for the inventory items.
38000	Establish field and read the header record (#INVFILE).
38100	Establish field and write the header record (#INVFILE).
38200	Establish field for the header record (#INVFILE).
44000-44010	Terminate output prompt to print next screen page.

2-4 $INV.POS - POINT OF SALES

2-4-1 $INV.POS Data Files

#INVFILE

2-4-2 $INV.POS Functional Description

$INV.POS allows on-line inventory update concurrently with receipt generation and other point of sale transactions. The POS menu contains these functions: QF - Query File, CR - cash register, RET - returned items, and COR - close out registers.

2-4-3 INV.POS Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
10000-10310	Initialize, read data field names and field data type mnemonics, and establish the record field.
11000-11140	Print POS menu, accept selected menu, and jump to the subroutine for the selected function.
19900-19950	Exit routine to the main menu.
21000-21190	Query #INVFILE and print the selected record.
22000-22170	Generate a carriage return, define print using format, print heading, query for item, and check data base to determine if balance is greater than or equal to the number sold.

2-4-3 $INV.POS Code Breakdown (continued)

LINE NUMBER	DESCRIPTION
22180-22300	Check if the item has a special price, calculate amount spent for item, update YTD sales, update date of last sale, and update YTD sold.
22301-22307	Check if receipt total exceeds 30.
22310-22335	A null (return) was typed or 30 items were reached, finalizing the sale. Calculate tax using straight percentage.
22340-22630	Print the receipt on the terminal and generate a hard copy, if desired.
22700-22880	'INVALID' is entered. Remove the item in error, decrement index, and query item to be sold.
23000-23450	Request the name and quantity of returned items. Calculate tax and total value. Update the fields, and print a list of the returned items. Return to the POS menu.
24000-24200	Generate total dollar intake and outgo since the last COR. Associate this with the range of receipt numbers generated. Find the net dollar value which should be on hand, and return to the POS menu.
38000	Establish the field and read header record.
38100	Establish the field and write header record.
38200	Establish the header record field.

2-5 $INV.RG - REPORT GENERATION

2-5-1 $INV.RG Data Files

#INVFILE

2-5-2 $INV.RG Functional Description

$INV.RG generates the reports which are the main output of the Inventory Management System Software. Each report is generated by a separate program: EX - Exception Report, OO - On Order Report, IS - Inventory Status Report, PI - Physical Inventory Sheet, DI - Detailed Inventory Report, ABC - Analysis By Cost, and QF - Query File.

2-5-3 $INV.RG Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
10000-10310	Initialize, read in data field names and mnemonics of type of field data, and establish the record field.
11000-11250	Print RG menu, accept menu selection, and jump to the subroutine for the selected function.
21000-21190	Query the record key, check its validity, and print the record information.
22000-22250	EX exception report for: 1-past due orders, 2-reorders, 3-minimum stock less than minimum balance, and 4-depleted items.
23000-23190	OO, On Order Report, prints all items on order.
24000-24320	IS, Inventory Status Report, prints current status for all inventory items.
27000-27130	PI, Physical Inventory Sheet, prints a list of all inventory items and spaces to be checked on actual inventory.
28000-28110	DI, Detailed Inventory Report, prints all information for all data base items.
29000-29180	ABC, Analysis By Cost, is printed from highest to lowest extended cost along with a percentage of the total value of the inventory.
38000	Establish the header record field and read it.
38100	Establish the header record field and write it.
38200	Establish the the header record field.
44000-44010	Query for ready or not.

2-6 $INV.SYS - SYSTEM PARAMETER SET UP

2-6-1 $INV.SYS Data File

#INV.SYS

2-6-2 $INV.SYS Functional Description

$INV.SYS sets up the system parameters, and updates or creates the #INV.SYS File.

2-6-3 #INV.SYS Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
00090-00100	Print prompt message.
01100-01160	Process disk changes according to the drive specified, if needed.
02000-02010	Query whether to create or update file.
04000-04020	Create #INV.SYS File and write header record.
05000-05999	Update #INV.SYS File.
19900-19930	Exit routine.

2-7 $INV.LNK - DATA DISK LINKAGE

2-7-1 $INV.LNK Data Files

#INV.LNK

2-7-2 $INV.LNK Functional description

$INV.LNK links the data disk to the system disk for storage and processing.

2-7-3 $INV.LNK Code breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
00090-00100	Print prompt message.
01100-01160	Process disk change according to the drive specified, if needed.
02000-02010	Query whether to create or update Linkage File #INV.LNK.
04000-04030	Create new #INV.LNK File and write the header record.
05000-05999	Update the #INV.LNK File and query for update entries.
19900-19930	Exit routine.

2-8 $INV.CRE - DATA FILE CREATION

2-8-1 $INV.CRE Data Files

#INVFILE

2-8-2 $INV.CRE Functional Description

$INV.CRE creates all data files used in the Inventory Management System.

2-8-3 $INV.CRE Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
01100-01160	Process disk changes according to the drive specified, if needed.
06000-06310	Create #INVFILE File.
19900-19930	Exit routine.
38000	Establish the field and read the header record.
38100	Establish the field and write the header record.
38200	Establish the field for the header record.

SECTION 3

SORTED CROSS-REFERENCE AND VARIABLE DEFINITION

3-1 IM MENU

3-1-1 IM MENU Variable Description

Variable	Description
DK%	Disk drive number
E$	End string
IM	Main menu program pointer
IP	Subprogram pointer
M$(	Array holding one of four menu selections
N1$-N5$	File name strings
PN$	Program name
Q	Query help message pointer
Q$	Query string
QS	Query prompt length
QT	Query tab spaces
R$	User response to query
RL	Length of R$
VD$	Date string
VT$	Type of disk used

3-1-2 IM MENU - Variable Cross Reference

Variable	References
#1	2010
DK%	2010
E$	310, 1210
FO%	19900
I	1220, 1221, 1260, 1270
IM	320, 2010
IP	320, 2010
M$(	300, 1220, 1260, 1270
N1$	2000
PN$	19920
Q	1195, 1680, 1865, 1900
Q$	1195, 1680, 1865, 1900, 2000, 2010
QS	310
QT	1195, 1865, 1900
R$	1210, 1220, 1225, 1230, 1235, 1700, 1710, 1720, 1725, 1728, 1730, 1740, 1750, 1772, 1880, 1882, 1884, 1886, 1888, 1890, 1892, 1894, 1895, 1920
RL	1910
VD$	1920, 2010
VT$	1225, 1230

3-2 $INV.IFM

3-2-1 $INV.IFM Variable Description

Variable	Description
DI%	Disk drive number
DK%(	Disk drive that holds program
E$	End string
ER%	Error code
FB$(	Array for data values in #INVFILE
FD$(	Dimensioned area in #INVFILE
FI%	File number
FO%	Error detect, true when error occurs
FS	Field size
FT$(	Dimensioned area in #INVFILE
FW(	Dimensioned area in #INVFILE
KE$	Key word used in #INVFILE
KEY$	Same as KE$
LB!	Lower bound for numerical entry
M	Tab format variable
N!	Used in query number
N1$-N5$	File name string
NA$	File name
NB%	Number of buffer
NF%	Number of files
PN$	Program name
Q	Query Help Message Pointer
Q$	Query String
QT	Query Tab Space
R$	User response to Query
R1$-R4$	Not used in this program
R1%-R2%	Not used in this program
R3#-R4#	Not used in this program
RL	Length of R$
T$	Temporary variable string
UB!	Upper bound for numerical entry

3-2-2 $INV.IFM - Variable Cross Reference

Variable	References
DI%	10030
DK%	10030
E$	10000, 11125, 21015, 23063, 23105, 23235, 23265, 23275, 24045, 24095, 25075, 25115, 25205, 25235, 25375, 25455, 25475, 25515
ER%	10030, 21040, 21050, 23066, 24060, 25130, 25140, 25386, 25400
FB$(	10050, 10200, 21030, 21072, 21100, 21110, 21120, 21125
FD$(	10050, 10080, 21070, 21090, 25330, 25340, 25355
FI%	10030, 10200, 38200
FNDI$(	38100
FNDS$(	21120
FNID#(	21125, 38000
FO%	10030, 19900
FS	10040, 10050, 10060, 10080, 10150, 10190, 21080, 23090, 23160, 23260, 25180, 25230, 25320, 25355, 25370
FT$(	10050, 10150, 21100, 21110, 21120, 21125
FW(	10050, 10060, 10200, 10210
I	10060, 10080, 10150, 10190, 10200, 10210, 25320, 25330, 25340, 25350
II	23090, 23110, 23160, 23180, 23270, 25180, 25240, 25375
J	21070, 21080, 21090, 21100, 21110, 21120, 21125
KE$	21030, 25383

3-2-2 $INV.IFM - Variable Cross Reference (continued)

Variable	References
KEY$	21030, 23064, 24050, 24080, 24120, 25120, 25160, 25420
LB!	23080, 23260, 23270, 25070, 25230, 25240, 25370, 25465
M	21080, 21090
N!	23270, 25080, 25240, 25375
NA$	10030
NB%	10020
NF%	10020
PN$	19920
PR	11000
Q	11120, 19940, 21010, 21150, 23060, 23080, 23220, 23250, 23270, 23290, 24030, 24080, 24130, 25060, 25100, 25190, 25220, 25240, 25260, 25360, 25380, 25440, 25465, 25500
Q$	11110, 19930, 21005, 21150, 23060, 23220, 23250, 23290, 24030, 24080, 24130, 25060, 25100, 25190, 25220, 25260, 25360, 25380, 25440, 25500
QS	10000
QT	11120, 19940, 21010, 21150, 23060, 23080, 23220, 23250, 23270, 23290, 24030, 24080, 24130, 25060, 25100, 25190, 25220, 25240, 25260, 25360, 25380, 25440, 25465, 25500
R$	11125, 11130, 11150, 11160, 11170, 21015, 21020, 21030, 21060, 23063, 23064, 23105, 23235, 23265, 23275, 24045, 24046, 24050, 24095, 25075, 25115, 25116, 25120, 25205, 25235, 25375, 25383, 25455, 25475, 25515
R1$	38000, 38100, 38200
R1%	38000, 38100

3-2-2 $INV.IFM - Variable Cross Reference (continued)

Variable	References
R2$	38000, 38100, 38200
R2%	38000, 38100
R3#	38000, 38100
R3$	38000, 38100, 38200
R4#	38000, 38100
R4$	38000, 38100, 38200
RL	25383
T	10190, 10200, 10210
T$	10200
UB!	23080, 23260, 23270, 25070, 25230, 25240, 25370, 25465
X#	21125
YES	21190, 23240, 23310, 24100, 24150, 25210, 25280, 25460, 25520

3-3 $INV.IU

3-3-1 $INV.IU Variable Description

Variable	Description
A#	Average cost
C#	Average cost
CC#	Total cost
CG#	Gross profit on the YTD Report
CS!	YTD number sold
CS#	Total YTD sales for End-of-Period Report
CY#	YTD sale on the YTD Report
D#	Current price
DI%	Disk drive number
DK%	Drive number
E$	End string
ER%	Error code
F1$	Formatted string for print using statement
F2$	Formatted string fot print using statement
FB$(	Array for values in #INVFILE
FD$(	Dimensioned area in #INFVFILE
FI%	File number
FS	Field size
FT$(	Dimensioned area in #INVFILE
FW(	Dimensioned area in #INVFILE
HEAD$	Program heading
KE$	Record key
LB!	Lower bound for numerical entry
LC	Line counter
M	Tab format variable
M!	Previous balance, minus sales, plus receipts and adjustments
N!	Set to number entered in query
N1$-N5$	Data file names
NA$	Data file name #INVFILE
NB!	New balance
NB%	Buffer number
NF%	Number of files
NR	Number of reports per page
P#	Total dollars returned
PA	Current page number
PB!	Previous balance
PN$	Program name
PR	Flag to indicate hardcopy desired

3-3-1 $INV.IU Variable Description (continued)

Variable	Description
R	Report number
R$	User response
R$	User response
R1$-R4$	Header record entry, not used in this program
R1%-R2%	Unpacked values for R1$ and R2$
R3#-R4#	Unpacked values for R3$ and R4%
RL$	Leftmost character of R$
S#	Set to YTD sales from the Inventory File
SK%	New page indicator
T	Field buffer
T#	YTD number sold
T1$	Used to print item description on the label
T2$	Used to print item key on the label
UB!	Upper bound for the numerical entry
VD$	System date
X#	Dollar value returned from query
YES	Return from YES/NO Subroutine
YTD	Flag to indicate End-of-Year

3-3-2 $INV.IU - Variable Cross Reference

Variable	References
A#	22150, 22180
C#	22150, 22160, 23310, 23330, 23350
CC#	23130, 23350, 23370
CG#	25015, 25145, 25170
CS!	25015, 25145, 25170
CS#	23130, 23350, 23370
CY#	25015, 25145, 25170
D#	22150, 26050, 26071, 26130
DI%	10030
DK%	10030
E$	10000, 11120, 21015, 22045, 22105, 22134, 22225, 22255, 22285, 22315, 22345, 22356, 22375, 22405, 22435, 23065, 23095, 25025, 25040, 26040, 26073, 26075, 26095, 26114, 44000, 44010
ER%	10030, 21040, 21050, 22060, 23255, 25115, 26050, 26060
F1$	23000, 23320, 25000, 25130
F2$	23010, 23330, 23370, 25010, 25140, 25170
FB$(	10050, 10200, 21030, 21072, 21100, 21110, 21120, 21125, 22050, 22115, 22136, 22140, 22150, 22160, 22200, 22210, 22290, 22350, 22358, 22407, 22408, 22410, 22412, 23255, 23260, 23270, 23280, 23290, 23300, 23310, 23320, 23340, 25115, 25120, 25130, 25140, 25145, 26040, 26050, 26120, 26130
FD$(	10050, 10080, 21070, 21090
FI%	10030, 10200, 38200
FNDI$(	22160, 22408, 23340, 38100
FNDS$(	21120, 22210

3-3-2 $INV.IU - Variable Cross Reference (continued)

Variable	References
FNID#(	21125, 22150, 22200, 22407, 22408, 23310, 25120, 25130, 25140, 25145, 26050, 38000
FNSD!(	22290, 22358, 23290
FO%	10030, 19900
FS	10040, 10050, 10060, 10080, 10150, 10190, 21080
FT$(	10050, 10150, 21100, 21110, 21120, 21125
FW(	10050, 10060, 10200, 10210
HEAD$	23120, 25020, 26000
I	10060, 10080, 10150, 10190, 10200, 10210, 26150, 26170
J	21070, 21080, 21090, 21100, 21110, 21120, 21125
KE$	21030, 22050, 23255, 25115, 26040
KEY$	21030, 22050, 22415, 26040, 26070
LB!	22090, 22340, 22390, 26090
LC	23120, 23140, 23250, 23330, 23370, 25020, 25030, 25110, 25140, 25170
M	21080, 21090
M!	22136, 22150
N!	22110, 22115, 22120, 22140, 22150, 22350, 22407, 22410, 22412, 26100, 26150
NA$	10030
NB!	23270, 23280, 23320
NB%	10020
NF%	10020

3-3-2 $INV.IU - Variable Cross Reference (continued)

Variable	References
NR	23120, 25020, 26010
P#	22407, 22408
PA	23120, 25020
PAGE	26010
PB!	23260, 23270, 23320
PN$	19920
PR	11000, 23100, 23110, 23140, 25026, 25027, 25030, 26116, 26118, 44000
Q	11110, 19940, 21010, 21150, 22030, 22090, 22130, 22210, 22240, 22270, 22310, 22330, 22352, 22360, 22390, 22420, 23050, 23080, 25024, 26020, 26072, 26074, 26080, 26112, 44000
Q$	11100, 19930, 21005, 21150, 22030, 22090, 22120, 22210, 22240, 22270, 22300, 22330, 22352, 22360, 22390, 22420, 23050, 23080, 25022, 26020, 26072, 26074, 26080, 26110, 44000
QS	10000
QT	11110, 19940, 21010, 21150, 22030, 22090, 22130, 22210, 22240, 22270, 22310, 22330, 22352, 22360, 22390, 22420, 23050, 23080, 25024, 26020, 26072, 26074, 26080, 26112, 44000
R	23120, 25020, 26010
R$	11120, 11130, 11140, 11150, 11160, 11170, 21015, 21020, 21030, 21060, 22045, 22046, 22050, 22105, 22134, 22225, 22255, 22285, 22290, 22315, 22345, 22356, 22358, 22375, 22405, 22435, 23065, 23095, 25025, 25040, 26040, 26073, 26075, 26095, 26114, 44000, 44010
R1$	38000, 38100, 38200
R1%	38000, 38100
R2$	38000, 38100, 38200

3-3-2 $INV.IU - Variable Cross Reference (continued)

Variable	References
R2%	38000, 38100
R3#	38000, 38100
R3$	38000, 38100, 38200
R4#	38000, 38100
R4$	38000, 38100, 38200
RL$	23100, 23110, 25026, 25027, 26116, 26118
S#	23310, 23330, 23350
SK%	23190, 23250, 25060, 25110
T	10190, 10200, 10210
T#	25120, 25140, 25145
T$	10200
T1$	26120, 26160
T2$	26130, 26160
UB!	22090, 22340, 22390, 26090
VD$	23290
X#	21125
YES	21190, 22230, 22260, 22320, 22380, 22440, 23070, 26073, 44010
YTD	23070, 23340

3-4 $INV.POS

3-4-1 $INV.POS Variable Description

Variable	Description
D#	Dollar amount
DE$	Used to handle the item description
DE$(	Array of DE$
DI%	Disk drive number
DK%	Drive number
E$	End string
ER%	Error code
F1$	Formatted string for print using statement
F2$	Formatted string for print using statement
FB$(	Array for data values in #INVFILE
FD$(	Dimensioned area in #INVFILE
FI%	File number
FS	Field size
FT$(	Dimensioned area in #INVFILE
FW(	Dimensioned area in #INVFILE
IT$	Field used to print receipts
IT$(	Holds receipt information to be printed
KE$	Record key
LB!	Lower bound for numerical entry
LD$	Field used to print receipts
LD$(	Print buffer and aids in INVALID Command error correction
M	Tab format variable
N!	Return from number query
N1$-N5$	Data file names
NA$	Name of data file
NB!	Current balance
NB%	Buffer number
NF%	Number of files
NU	Set to number returned from number query
NU(	Holds information to be printed
P	Flag that indicates a receipt has been printed
P#	Amount spent on this item
PN$	Program name
PR	Flag to indicate hardcopy
PR#	Set to dollar amount returned from query
PR#(	Print buffer and aids in INVALID Command error correction
R$	User response
R1$	String to store R1%

3-4-1 $INV.POS Variable Description (continued)

Variable	Description
R1%	Current receipt number
R2$	String that stores R2%
R2%	Number of receipts
R3$	String that stores R3#
R3#	Total dollar intake since the last close out register
R4$	String that stores R4#
R4#	Total value returned since last close out register
SUM#	Receipt total
T$	Establishes field of a file
TAX#	Tax on the receipt
U$	Left three characters of UL$
UB!	Upper bound for numerical entry
UL$	Underline string
V$(	Company name
VD$	System date
X#	Dollar value in query item
YES	Return from YES/NO routine

3-4-2 $INV.POS - Variable Cross Reference

Variable	References
D#	22240, 23140, 23360
DE$	22560
DE$(	22000, 22163, 22450, 22860
DI%	10030
DK%	10030
E$	10000, 11095, 21015, 22055, 22155, 22158, 22195, 22235, 22322, 22525, 23040, 23135, 23205, 23245, 24165
ER%	10030, 21040, 21050, 22100, 22110, 23060, 23070
F1$	22003, 22450, 23010, 23360
F2$	22003, 22180, 22301, 22470, 22480, 22490, 23010, 23370, 23390, 24000, 24090, 24100, 24120
FB$(	10050, 10200, 21030, 21072, 21100, 21110, 21120, 21125, 22156, 22163, 22170, 22260, 22270, 22280, 22290, 22590, 22600, 22610, 22620, 22780, 22790, 22800, 22810, 23150, 23160, 23170
FD$(	10050, 10080, 21070, 21090
FI%	10030, 10200, 38200
FNDI$(	22260, 22590, 22780, 23150, 38100
FNDS$(	21120
FNID#(	21125, 22170, 22260, 22590, 22780, 23150, 38000
FNSD!(	22280
FO%	10030, 19900
FS	10040, 10050, 10060, 10080, 10150, 10190, 21080
FT$(	10050, 10150, 21100, 21110, 21120, 21125

3-4-2 $INV.POS - Variable Cross Reference (continued)

Variable	References
FW(	10050, 10060, 10200, 10210
I	10060, 10080, 10150, 10190, 10200, 10210, 22002, 22030, 22163, 22170, 22180, 22240, 22250, 22270, 22290, 22302, 22330, 22440, 22560, 22570, 22580, 22600, 22610, 22620, 22630, 22730, 22850, 23000
IT$	22560
IT$(	22000, 22163, 22570, 22740, 22860
J	21070, 21080, 21090, 21100, 21110, 21120, 21125, 22440, 22450, 22720, 22730, 22740, 22770, 22790, 22800, 22810, 22830, 22850, 22860, 22870
KE$	21030, 22163, 23360
KEY$	21030, 22090, 22163, 22570, 22720, 22740, 23050
LB!	22150, 22310, 23100, 23190
LD$	22560
LD$(	22000, 22163, 22610, 22800, 22870
M	21080, 21090
N!	22155, 22157, 22158, 22170, 22325, 22480, 23110, 23140, 23160, 23170, 23180, 23210, 23370
NA$	10030
NB!	22156, 22157
NB%	10020
NF%	10020
NU	22560, 23180, 23360
NU(	22000, 22170, 22250, 22270, 22290, 22450, 22580, 22600, 22620, 22770, 22790, 22810, 22830, 22860

3-4-2 $INV.POS - Variable Cross Reference (continued)

Variable	References
P	22335, 22500, 22530, 24010, 24140, 24170
P#	22250, 22260, 22300, 22580, 22590, 22770, 22780, 22820, 23140, 23150, 23210, 23220, 23360, 23390
PN$	19920
PR	11000
PR#	22560
PR#(	22000, 22170, 22180, 22240, 22250, 22450, 22580, 22770, 22860
Q	11080, 19940, 21010, 21150, 22040, 22140, 22180, 22220, 22310, 22510, 22700, 23020, 23090, 23120, 23190, 23230, 23410, 24150
Q$	11080, 19930, 21005, 21150, 22040, 22140, 22158, 22180, 22220, 22310, 22510, 22700, 23020, 23090, 23120, 23190, 23230, 23410, 24150
QS	10000
QT	11080, 19940, 21010, 21150, 22040, 22140, 22180, 22220, 22310, 22510, 22700, 23020, 23090, 23120, 23190, 23230, 23410, 24150
R$	11095, 11100, 11110, 11120, 11130, 21015, 21020, 21030, 21060, 22055, 22060, 22070, 22080, 22090, 22120, 22155, 22158, 22195, 22235, 22322, 22525, 22720, 22830, 22880, 23040, 23050, 23080, 23135, 23205, 23245, 24165
R1$	38000, 38100, 38200
R1%	22330, 22370, 24060, 24080, 24190, 38000, 38100
R2$	38000, 38100, 38200
R2%	24060, 24070, 24190, 38000, 38100
R3#	22330, 24090, 24120, 24190, 38000, 38100

3-4-2 $INV.POS - Variable Cross Reference (continued)

Variable	References
R3$	38000, 38100, 38200
R4#	23220, 24100, 24120, 24190, 38000, 38100
R4$	38000, 38100, 38200
S	22335, 22500, 22530, 24010, 24140, 24170
SUM#	22030, 22300, 22301, 22325, 22330, 22470, 22490, 22820
T	10190, 10200, 10210
T$	10200
TAX#	22325, 22330, 22480, 22490, 23210, 23220, 23370, 23390
U$	22002, 22420
UB!	22150, 22310, 23100, 23190
UL$	22002, 22380, 22390, 22400, 22410, 23000, 23310, 23320, 23330, 23340
V$(	22350, 23280, 24030
VD$	22280, 22360, 23290, 24040
X#	21125
YES	21190, 22159, 22200, 22530, 23250, 23430, 24170

3-5 $INV.RG

3-5-1 $INV.RG Variable Description

Variable	Description
AV!	Number of units available
CU#	Cumulative total
CUM#	Same as CU#
DD	Lead time in days
DI%	Disk drive number
DK%	Drive number
E	Exponential sign
E$	End string
EN	Error detect
ER%	Error code
F1$-F4$	Print format strings
FB$(	Array for data values in #INVFILE
FD$(	Dimensioned array
FI%	File number
FS	Field size
FT$(	Dimensioned area in #INVFILE
FW(	Dimensioned area in #INVFILE
GV#	Grand value
HEAD$	Report heading
KE$	Product key word
LC	Line counter
M	Tab space variable
N1$-N5$	File name strings
NA$	Name of data file
NB!	Current balance
NB%	Buffer number
NF%	Number of files
NR	Number of reports per page
OE!	Sort File end record value
PA	Current page number
PD	Past Due Item Flag
PN$	Program name
PP	FOR loop variable
PR	Hardcopy Flag
R1$-R4$	Header record entries, not used in $INV.RG
R1%-R2%	Unpacked header record entries
R3#-R4#	Unpacked header record entries
R	Report number

3-5-1 $INV.RG Variable Description (continued)

Variable	Description
R$	User response
RD!	Absolute date when order placed
RL$	Leftmost character of R$
S#	Zero
SD%	Number of drive that contains Sort File
SK!	Content of Sort File record
SK!(	Array of Sort File records
SK%	Terminal Output Flag
SN	Number of dimensions for SK! and SP$
SP$	Same as KE$
SP$(	Array to store KE$
T	File buffer
T#	Set to average cost
T$	Temporary string
TT#	Total cost of items in current balance
TV#	Total value of items in current balance
U$	Format string
VD!	Packed date value
VD$	Date string
X#	Temporary variable for double precision number
Y!	Number of items on order
Y#	Temporary variable for double precision totals
YES	User response to "MORE?" query

3-5-2 $INV.RG - Variable Cross Reference

Variable	References
#2	29135
AV!	24210, 24230
CU#	29160
CUM#	29000, 29050, 29155
DD	22160, 23150
DI%	10030
DK%	10030, 29003
E	29155
E$	10000, 11151, 11155, 12000, 21015, 22065, 23065, 24045, 27020, 28020, 29124, 44000, 44010
EN	29003, 29030, 29070
ER%	10030, 21040, 21050, 22145, 23135, 24170, 27105, 28030, 29030
F1$	22000, 22190, 23000, 23160, 24000, 24190, 27000, 27110, 29090, 29170
F2$	22010, 22200, 23010, 23180, 24010, 24220, 29095, 29175
F3$	24020, 24230
F4$	24025, 24310
FB$(	10050, 10200, 21030, 21072, 21100, 21110, 21120, 21125, 22145, 22150, 22160, 22170, 22180, 22190, 22200, 22220, 23135, 23140, 23150, 23160, 23170, 24170, 24190, 24200, 24210, 24220, 24230, 27105, 27110, 28030, 28050, 28080, 28090, 28100, 28110, 29040, 29050, 29140, 29150, 29160, 29170
FD$(	10050, 10080, 21070, 21090, 28040, 28070
FI%	10030, 10200, 38200
FNDI$(	38100

3-5-2 $INV.RG - Variable Cross Reference (continued)

Variable	References
FNDS$(	21120, 23160, 27110, 28100
FNID#(	21125, 23170, 24210, 28110, 29050, 29160, 38000
FO%	10030, 19900
FS	10040, 10050, 10060, 10080, 10150, 10190, 21080, 28060
FT$(	10050, 10150, 21100, 21110, 21120, 21125, 28080, 28090, 28100, 28110
FW(	10050, 10060, 10200, 10210
GV#	24030, 24235, 24310
HEAD$	22020, 23020, 24030, 27010, 28000, 29100
I	10060, 10080, 10150, 10190, 10200, 10210, 29110, 29170, 29180
IT	11150, 11158, 12000, 12010, 12020, 12030
J	21070, 21080, 21090, 21100, 21110, 21120, 21125, 28040, 28060, 28070, 28080, 28090, 28100, 28110
KE$	21030, 22145, 23135, 24170, 27105, 28030, 29050, 29135, 29140, 29170
KEY$	21030
LC	22020, 22060, 22140, 22240, 23020, 23060, 23130, 23180, 24030, 24040, 24150, 24230, 24320, 27010, 27015, 27100, 27120, 28000, 28010, 28070, 29100, 29123, 29129, 29175
M	21080, 21090, 28060, 28070
NA$	10030
NB!	22150, 22180, 22200, 22220, 22230, 24200, 24210, 24220, 29040, 29050, 29150, 29160, 29175
NB%	10020

3-5-2 $INV.RG - Variable Cross Reference (continued)

Variable	References
NF%	10020
NR	22020, 23020, 24030, 27010, 28000, 29100
OE!	29135
PA	22020, 23020, 24030, 27010, 28000, 29100
PD	22170, 22180, 22210
PN$	19920
PP	28070
PR	11000, 11156, 11157, 22060, 23060, 24040, 27015, 28010, 29077, 29123, 44000
Q	11150, 11154, 19940, 21010, 21150, 44000
Q$	11140, 11152, 19930, 21005, 21150, 44000
QS	10000
QT	11150, 11154, 19940, 21010, 21150, 44000
R	22020, 23020, 24030, 27010, 28000, 29100
R$	11151, 11155, 12000, 12010, 12020, 12030, 21015, 21020, 21030, 21060, 22065, 23065, 24045, 27020, 28020, 29124, 44000, 44010
R1$	38000, 38100, 38200
R1%	38000, 38100
R2$	38000, 38100, 38200
R2%	38000, 38100
R3#	38000, 38100
R3$	38000, 38100, 38200
R4#	38000, 38100
R4$	38000, 38100, 38200

3-5-2 $INV.RG - Variable Cross Reference (continued)

Variable	References
RD!	22160, 22170, 23150, 23160
RL$	11156, 11157
S#	29110, 29160, 29175
SD%	29003, 29110, 29135
SK!	29050, 29080, 29135
SK!(	29000
SK%	22070, 22140, 23070, 23130, 24070, 24150, 27050, 27100, 29125, 29129
SN	29000
SP$	29050, 29080
SP$(	29000
T	10190, 10200, 10210
T#	23170, 23180, 29050, 29160, 29175
T$	10200
TT#	29160, 29175
TV#	24210, 24230, 24235
U$	27005, 27120
VD!	22015, 22170
VD$	22015
WI	29003
WO	29003
X#	21125, 28110
Y!	23170, 23180
Y#	29160, 29175

3-5-2 $INV.RG - Variable Cross Reference (continued)

Variable	References
YES	21190, 44010

3-6 $INV.SYS

3-6-1 $INV.SYS Variable Description

Variable	Description
D	Disk drive number
FC%	Set to true
FS	Field size
IC$(	Array for the type of Parameter File entries
IL(	Array for the length of Parameter File entries
IT$(	Array for the name of Parameter File entries
LB!	Lower bound
N!	Drive number
N$	Holds " for the System File
R$	User response to Query
RI	Input specifier
RL$	Leftmost character of R$
TE	Number of elements
UB!	Upper bound
VV$(	Array for the System Parameter File entries
W	Width of CRT output
WIDTH	Width
YES	Return from the YES/NO Subroutine

3-6-2 $INV.SYS - Variable Cross Reference

Variable	References
#1	4010, 4020, 5010, 5030, 5040
D%	1110, 1140, 1160, 4010, 5010, 5030
FC%	4010, 5722, 5732, 5743, 5752
I	5020, 5650, 5715, 5720, 5724, 5730, 5740, 5750, 5986, 5990
IC$(	5720, 5730, 5740, 5750, 5985, 5990
II	4020, 5010, 5040
IL(	5724, 5985, 5990
IT$(	5715, 5985, 5990
LB!	1110
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
QS	95
QT	1100, 1120, 1150, 2010, 5700
R$	5650, 5722, 5724, 5732, 5743, 5752, 5753, 5754
RI	5700, 5799
RL$	2010
TE	4010, 4020, 5010, 5020, 5030, 5040, 5980, 5985, 5986, 5990

3-6-2 $INV.SYS - Variable Cross Reference (continued)

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

3-7 $INV.LNK

3-7-1 $INV.LNK Variable Desciption

Variable	Description
D%	Disk drive number
FC%	Set to true
FS	Field size
IC$(	Array for the type of Parameter File entries
IL(	Array for the length of Parameter File entries
IM	Holds 1 for string representation
IP	Holds 0 for string representation
IT$(	Array for the name of Parameter File entries
LB!	Lower bound
N!	Drive number
R$	User response to Query
RI	Input specifier
RL$	Leftmost character of R$
TE	Number of elements
UB!	Upper bound
VV$(	Array for the system Parameter File entries
W	Width of CRT output
WIDTH	Width
YES	Return from the YES/NO Subroutine

3-7-2 $INV.LNK - Variable Cross Reference

Variable	References
#1	4020, 4030, 5010, 5040, 5050
D%	1110, 1140, 1160, 4010, 5010, 5030
FC%	4010, 5722, 5732, 5743, 5752
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
QS	95
QT	1100, 1120, 1150, 2010, 5700
R$	5650, 5722, 5724, 5732, 5743, 5752, 5753, 5754
RI	5700, 5799
RL$	2010
TE	4020, 5010, 5020, 5040, 5980, 5985, 5986, 5990

3-7-2 $INV.LNK - Variable Cross Reference (continued)

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

3-8 $INV.CRE

3-8-1 $INV.CRE Variable Description

Variable	Description
BU$	Used to retrieve company name
D%	Used to store the drive number
DA$	Creation date
DI%	Disk drive number
FI%	File number
FS	Field size
I2$	128 byte string
LB!	Lower bound
N!	Number returned from the query routine
NA$	File name
NAM$	ISAM data file names
NB%	Buffer number
NF%	Number of files
NV$	String that holds number of invoices in #A.ARAA Data File
R1$	String to hold R1%
R1%	Current receipt number
R2$	String to hold R2%
R2%	Number of receipts
R3$	String to hold R3#
R3#	Total dollar intake since the last close out register
R4$	String to hold R4#
R4#	Total value returned since the last close out register
UB!	Upper bound
VD$	System date
YES	Return from the YES/NO Subroutine

3-8-2 $INV.CRE - Variable Cross Reference

Variable	References
D%	1110, 1140, 1160, 6015, 6020
DA$	6020
DI%	6020
FI%	6028, 38200
FNDI$(	38100
FNID#(	38000
LB!	1110
N!	1110
NA$	6028
NB%	6025
NF%	6025
PN$	19900
Q	1100, 1120, 1150
Q$	1100, 1120, 1150, 6016
QS	100
QT	1100, 1120, 1150
R1$	38000, 38100, 38200
R1%	6030, 38000, 38100
R2$	38000, 38100, 38200
R2%	6030, 38000, 38100
R3#	6030, 38000, 38100
R3$	38000, 38100, 38200
R4#	6030, 38000, 38100

3-8-2 $INV.CRE - Variable Cross Reference (continued)

Variable	References
R4$	38000, 38100, 38200
UB!	1110
VD$	6020
YES	1130, 1150, 6017

3-9 COMMON ROUTINE 46000-49999

3-9-1 Common Routine 46000-49999 Variable Description

Variable	Definition
D!	Absolute date
D#	Dollar value
DD	Absolute date value
E$	End string
FB$(	Array to hold values in #INVFILE
FD$(	Dimensioned area in #INVFILE
FT$(	Dimensioned area in #INVFILE
HEAD$	Program heading
LC	Line counter
MM	Pointer for the month
MO	Month
MO(	Array for the days of month
N!	Set to number entered from query
NR	Number of reports per page
PAGE	Current page number
PR	Hardcopy Flag
R	Report number
R$	User response
SC$	Clear screen code
SK%	Terminal Output Flag
T	File buffer
V$(	Company name
VD$	System date
W	Page width
X#	Temporary variable for double precision number
YES	Return from YES/NO Subroutine
YY	Absolute year

3-9-2 IM46000 - Variable Cross Reference

Variable	References
D!	46020, 46060
D#	48110
DD	46020, 46030, 46040, 46060
E$	47003, 48025, 48055, 48085, 48105
FB$(	48030, 48060, 48090, 48110, 49010, 49020, 49030, 49035
FD$(	48000, 49000
FNDI$(	48110
FNDS$(	49030
FNID#(	49035
FNSD!(	48090
FT$(	48010, 48040, 48070, 49010, 49020, 49030
HEAD$	47120
II	46030, 48000, 48010, 48030, 48040, 48060, 48070, 48090, 48110, 49000, 49010, 49020, 49030, 49035
LC	47140
MM	46020, 46040, 46050, 46060
MO	46060
MO(	46000, 46010, 46020, 46040, 46060
N!	48060
NR	47000
PAGE	47110
PR	47000, 47100
Q	47002, 48020

3-9-2 IM46000 - Variable Cross Reference (continued)

Variable	References
Q$	47002, 48000, 48020, 48050, 48080, 48100
QT	47002
R	47000
R$	47003, 48025, 48030, 48055, 48085, 48090, 48105
SC$	47100
SK%	47140
T	46020
V$(	47110
VD$	47130
W	47110, 47120
X#	49035
YES	47003
YY	46020, 46030, 46060

3-10 COMMON ROUTINE 50000-59999

3-10-1 Common Routine 50000-59999 Variable Description

Variable	Description
BE$	Terminal bell
CH	Input character
D!	Valid date
DA	Input date
DG	Numerical Input Check Flag
DK%	Disk drive where program is located
DP	Decimal Point Input Flag
E$	End
ER%	Indicates error if non-zero
FS	Field size
HB$	Used to print help message
HF%	Help File number
HJ	Number of records
HK	Temporary variable for binary search
HL	Determines how to break help message into sentences
HN$(	Fielded variables for help number
HN(	Array for help number
HP	Index used in the binary search for help number
HS(	Starting record number
HS$(	Fielded variable for HS(
IM	Holds 1 for string value
IP	Holds 0 for string representation
LB!	Lower bound
LC	Line counter
LP	Hardcopy desired
MO	Input month
N!	Drive number
N#	Used to convert strings
N$	Input value
N1$-N5$	Holds program and data file name
P$	Variable for input string
PN$	Program printout heading string
Q	Query prompt message number
Q$	Query prompt message string
QT	Query tab space count
R$	String input after the prompt
RI	Input specifier
RL	Length of string input

3-10-1 Common Routine 50000-59999 Variable Description (continued)

Variable	Description
RL$	Holds the leftmost character of R$
S$	Eight byte string
IP	Holds 0 for string representation
LB!	Lower bound
LC	Line counter
LP	Hardcopy desired
MO	Input month
N!	Drive number
N#	Used to convert strings
N$	Input value
N1$-N5$	Holds program and data file name
P$	Variable for input string
PN$	Program printout heading string
Q	Query prompt message number
Q$	Query prompt message string
QT	Query tab space count
R$	String input after the prompt
RI	Input specifier
RL	Length of string input
RL$	Holds the leftmost character of R$
S$	Eight byte string
SC$	Clear screen codes
T$	HS, HP converted to a string
UB!	Upper bound
V$(	Array to hold the system elements
VC$	System company name
VD$	System date
VO$	Key value
VS$	System name
VT$	Disk type
W	Number of columns
WIDTH	Terminal line width
YES	Return from YES/NO Subroutine
YR	Input year

3-10-1 Common Routine 50000-59999 Variable Description (continued)

Variable	Description
RL$	Holds the leftmost character of R$
S$	Eight byte string
IP	Holds 0 for string representation
LB!	Lower bound
LC	Line counter
LP	Hardcopy desired
MO	Input month
N!	Drive number
N#	Used to convert strings
N$	Input value
N1$-N5$	Holds program and data file name
P$	Variable for input string
PN$	Program printout heading string
Q	Query prompt message number
Q$	Query prompt message string
QT	Query tab space count
R$	String input after the prompt
RI	Input specifier
RL	Length of string input
RL$	Holds the leftmost character of R$
S$	Eight byte string
SC$	Clear screen codes
T$	HS, HP converted to a string
UB!	Upper bound
V$(	Array to hold the system elements
VC$	System company name.
VD$	System date
VO$	Key value
VS$	System name
VT$	Disk type
W	Number of columns
WIDTH	Terminal line width
YES	Return from YES/NO Subroutine
YR	Input year

3-10-2 50000 - Variable Cross Reference

Variable	References
#1	50002, 50004, 50020
#HF%	59120, 59210, 59230, 59240
BE$	50000, 50200, 50300
BELL$	54000, 54100, 54200, 54300, 54530
CH	51240, 51250, 51260, 51270, 51660, 51670, 51680, 51690
D!	50175
D#	50160, 51655, 51710
DA	51400, 51424, 51426, 51430, 51440
DG	51200, 51250, 51280, 51600, 51670, 51700
DK%	50002, 50004
DP	51200, 51260, 51600, 51680
E$	51200
ER%	54050, 54100
FNDI$(	50160
FNDS$(	50175
FNID#(	50165
FNSD!(	50170
FS	51010
HB$	59120, 59210
HF%	59200
HJ	59000, 59080, 59090, 59110, 59120, 59240, 59250
HK	59000, 59080, 59100, 59120, 59150, 59230, 59240, 59250

Variable	References
HL	59130, 59140
HN$	59250
HN$(	59200, 59230, 59250
HN(	59090, 59100, 59200, 59250
HP	59080, 59090, 59100, 59110, 59240, 59250
HS	59110, 59120
HS$	59250
HS$(	59200, 59230, 59250
HS(	59000, 59110, 59200, 59250
I	50020, 54530
I$	50165
II	51030
IM	50002
IP	50002
JJ	51240, 51270, 51280, 51640, 51660, 51690, 51700
LB!	51290
LC	50920
LP	50900
MO	51400, 51422, 51430, 51440
N!	51200, 51290
N#	50160, 50165
N$	50004, 50020
N1$	50000

Variable	References
N2$	50004
N3$	50210
N4$	50310
N5$	59200
P$	50002, 55000, 55040, 55100, 55120
P1	55000, 55008, 55010, 55040, 55100, 55110, 55120
P1$	55000, 55005, 55008, 55010, 55020, 55100, 55110
P2	55010, 55020, 55040, 55110
P2$	55000, 55030, 55040, 55100, 55110, 55120
P3	55020, 55110
P3$	55005
P4	55020, 55030
P5	55020, 55030
PN$	50910
Q	51070, 59080, 59090, 59100
Q$	51000, 51800
QT	51000
R$	51010, 51015, 51020, 51030, 51200, 51220, 51230, 51240, 51290, 51400, 51420, 51422, 51424, 51426, 51430, 51620, 51640, 51650, 51655, 51660, 51710
RI	51010
RL	51015, 51030
RL$	51015, 51020, 51426, 51805, 51810

3-10-2 50000 - Variable Cross Reference (continued)

Variable	References
S$	50170
SC$	50055, 50900, 52000
STRING$(	55008, 55040, 55120
T$	59110, 59120, 59130, 59140, 59230
UB!	51290
V$(	50020, 50050
VC$	50050, 50905
VD$	50002, 50910
VO$	52010
VS$	50050, 50905
VT$	50050
W	50050, 50905, 50910
WIDTH	50050
YES	51805
YR	51400, 51430, 51440

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.

PCC 2000 ACCOUNTS RECEIVABLE SYSTEM

PROGRAM DOCUMENTATION

FEBRUARY 1980

United States and Canada

Pertec Computer Corporation
Computer Systems Division
20630 Nordhoff Street
Chatsworth, California 91311, U.S.A.
Phone (213) 998-1800
TWX (910) 494-2788

International

Pertec Computer Corporation
Business Systems Division
17332 Von Karman Avenue
Irvine, California 92714, U.S.A.
Phone (714) 540-8340
TWX (910) 595-1912

Printed in U.S.A. Publication No. 680503A c1980, Pertec Computer Corp.

CHANGE RECORD

Revision	Date	Pages Affected
A	2/80	Initial Release

FOREWORD

This document provides detailed program information regarding accounting software for the PCC 2000, Basic 2000-1-H. This document makes it easier to customize programs for specific needs. Although it is written for the PCC 2000 accounting programs, most of it also applies to the MITS 300 basic accounting programs.

This document is divided into three sections:

Section 1, System Documentation, describes the data structures, design constraints, and routines common to all accounting software packages. It is divided into the following subsections:

- System flowchart (program and file names)
- File structures
- Data file layouts and field explanations
- Limitations and restrictions
- Code breakdown and functional description of common routines.

Section 2, Program Documentation, covers the 18 application and utility programs in the Accounts Receivable System. Each program documentation has the following sections:

- Data files (used for input and/or output)
- Functional description (of each program)
- Code breakdown (with functional description)

Section 3, Sorted Cross-Reference and Variable Definition, lists and defines all variables for the programs covered in section two.

This document is used in conjunction with the PCC 2000 Accounts Receivable Software User's Manual (document number 248098).

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.

TABLE OF CONTENTS

1 SYSTEM DOCUMENTATION

1-1 System Flowchart 2
1-2 File Structures 3
1-3 Data File Layouts and Field Explanations 4
1-4 Restrictions and Limitations 13
1-5 Common Routines 13

2 PROGRAM DOCUMENTATION

2-1 AR MENU - Main Menu Selection 16
2-2 $A.ARCFM - Customer File Maintenance 16
2-3 $A.ARETS - Enter Sales Processing 18
2-4 $A.ARIVP - Invoice Processing 19
2-5 $A.ARETP - Payments, Credits and Adjustments 20
2-6 $A.ARPAP - Payment Processing 21
2-7 $A.ARRPG - Report Generation (Part 1) 22
2-8 $A.ARRG2 - Report Generation (Part 2) 23
2-9 $A.ARSTG - Statement Generation 25
2-10 $A.ARQUE - Query Customer Account Status 26
2-11 $A.AROCR - Open Credit Reconciliation and Processing, and End-of-Year Processing 26
2-12 $A.AREOD - End-Of-Day Processing 28
2-13 $A.AREOM - End-Of-Month Processing 28
2-14 $A.ARGLI - General Ledger Interface Maintenance 29
2-15 $A.ARGLT - General Ledger Transfer 30
2-16 $A.ARSYS - System Parameter Set Up 30
2-17 $A.ARLNK - Linkage File Maintenance 31
2-18 $A.ARCRE - Data File Creation 32

3 SORTED CROSS-REFERENCE AND VARIABLE DEFINITION

3-1 AR MENU 34
3-2 $A.ARCFM 37
3-3 $A.ARETS 41
3-4 $A.ARIVP 48
3-5 $A.ARETP 52
3-6 $A.ARPAP 55
3-7 $A.ARRPG 61
3-8 $A.ARRG2 65
3-9 $A.ARSTG 71
3-10 $A.ARQUE 74
3-11 $A.AROCR 78
3-12 $A.AREOD 83
3-13 $A.AREOM 88
3-14 $A.ARGLI 93
3-15 $A.ARGLT 96
3-16 $A.ARSYS 99

TABLE OF CONTENTS (Continued)

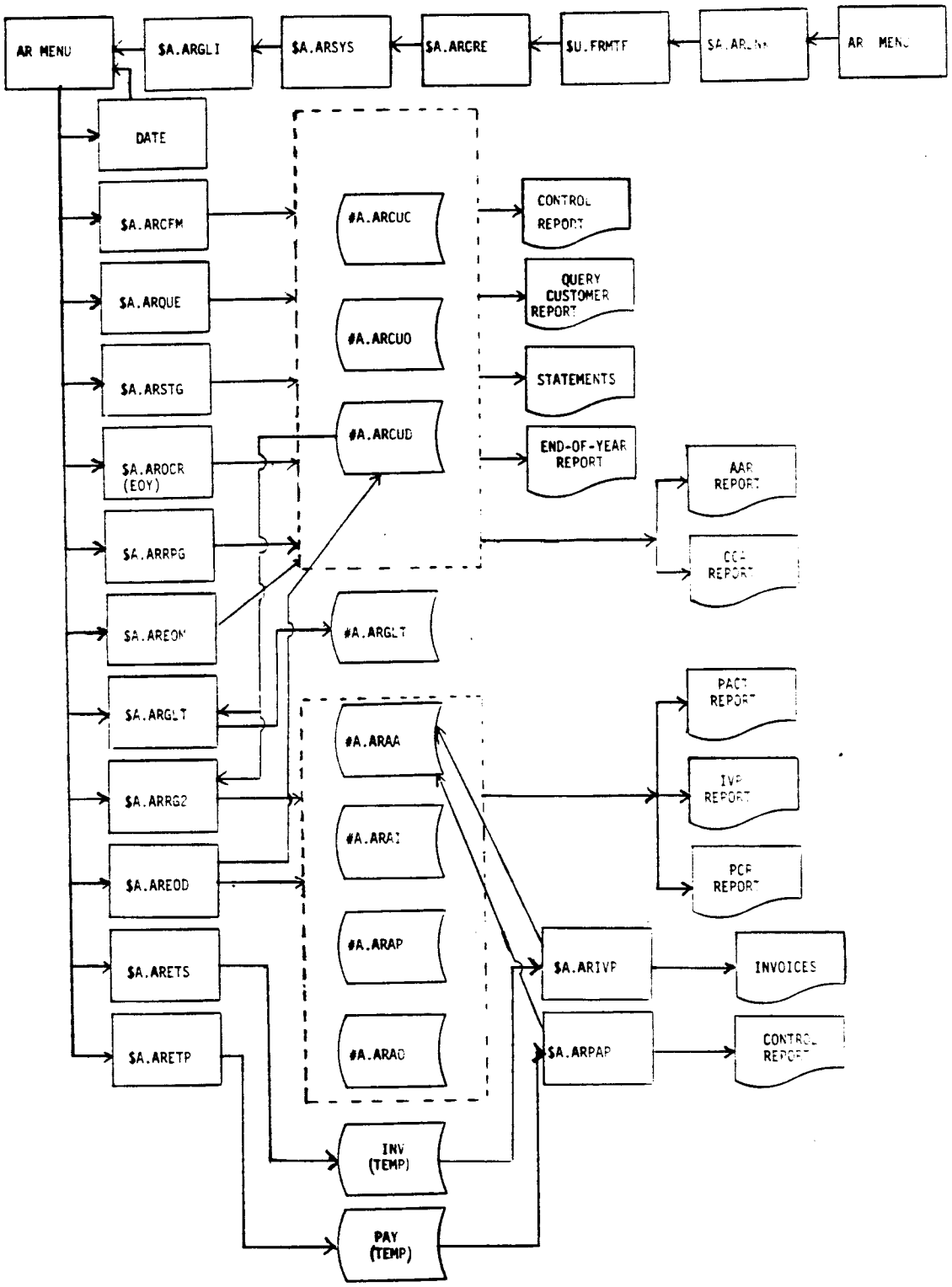
3-17 $A.ARLNK 102
3-18 $A.ARCRE 105
3-19 AR Common Routines 46000-49999 108
3-20 Common Routine 50000-59999 113

APPENDIX Floppy Disk to Hard Disk Conversion A-1

SECTION 1

SYSTEM DOCUMENTATION

1-1 SYSTEM FLOWCHART



1-2 FILE STRUCTURES

The Accounts Receivable system creates and maintains Customer Account and Periodic Activity Files. Customer Account Files are the customer data base and are divided into three files.

(1) Customer Data File (#A.ARCUD) contains customer name, address, type of account, current balance, and so forth. It requires one disk sector per customer.

(2) Customer Open Invoice File (#A.ARCUO) lists open customer invoices or customer credit not applied to a specific invoice. A disk sector maintains nine open invoices. These invoices are maintained until they are paid.

(3) Customer Recent Transaction File (#A.ARCUC) lists a two-month "moving window" of customer account transactions. A disk sector maintains thirteen transactions.

Periodic Activity Files monitor financial, daily, and monthly customer data base transactions. If a transaction affects the (purchase, payment, credit, adjustment, service charge added, or amount billed) balance, then a record is made of that transaction in a Current Periodic Activity File. When end-of-day is processed, this file is cleaned out and the transactions are added to the invoice register, or the payment, credit, and adjustment registers. End-of-month processing calculates the service charge and the amount specified in the customer account that is automatically billed.

1-3 DATA FILE LAYOUTS AND FIELD EXPLANATIONS

The Accounts Receivable System uses 11 data files.

SECTION	NAME	TYPE	DESCRIPTION
1-3-1	#A.ARCUD	ISAM random	Customer Data File holds name, address, type of account, current balance, etc.
1-3-2	#A.ARCUO	ISAM random	Customer Open Invoice File lists open invoices.
1-3-3	#A.ARCUC	ISAM random	Customer Recent Transaction File holds a two month "moving window" of all transactions.
1-3-4	#A.ARAA #A.ARAO	random random	Current and Previous Periodic Transaction Files
1-3-5	#A.ARAI	random	Invoice Register File
1-3-6	#A.ARAP	random	Payment, Credit, and Adjustment Register File
1-3-7	#A.ARGLT	random	GL Transfer File
1-3-8	#A.ARLNK	sequential	Data Disk Linkage File accessed by all programs
1-3-9	#A.ARSYS	sequential	System Parameter File accessed by all programs
	#A.ARHLP	random	Help Message File

This document covers all but the #A.ARHLP File.

1-3-1 #A.ARCUD - Customer Data File

#A.ARCUD uses two record layouts. The record listed below stores monthly totals and GL account totals.

FIELD NUMBER	BYTE RECORD POSITION	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	30-33	Current-to-date sales	4	GS#
2	34-37	Current-to-date freight	4	GF#
3	38-41	Current-to-date tax	4	GT#
4	42-45	Current-to-date service charge	4	GI#
5	46-49	Current-to-date payments	4	GP#
6	50-53	Current-to-date discounts	4	GD#
7	54-57	Current-to-date credits	4	GC#
8	58-61	Current-to-date adjustments	4	GA#
9	62-65	Current-to-date receivables	4	GR#
10	70-73	Month-to-date sales	4	MS#
11	74-77	Month-to-date freight	4	MF#
12	78-81	Month-to-date tax	4	MT#
13	82-85	Month-to-date service charge	4	MI#
14	86-89	Month-to-date payments	4	MP#
15	90-93	Month-to-date discounts	4	MD#
16	94-97	Month-to-date credits	4	MC#
17	98-101	Month-to-date adjustments	4	MA#
18	102-105	Month-to-date receivables	4	MR#

The data records listed below store the customer data. For more detailed layouts of the file please refer to the ISAM documentation in the PCC 2000 BASIC REFERENCE MANUAL (document number 248097).

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES	
1	Customer account number	6	AN$	F1$(0)
2	Customer name	24	CN$	F1$(1)
3	Address 1	24	A1$	F1$(2)
4	Address 2	24	A2$	F1$(3)
5	Phone number	6	PH$	F1$(4)
6	Type of account	1	TA$	F1$(7)
7	Credit terms	1	CT$	F1$(8)
8	Credit limit	4	CL#	F1$(9)
9	Tax rate	1	TR	F1$(10)
10	Discount rate	2	DR	F1$(11)
11	Date of last credit	4	DC$	F1$(12)
12	Date of last debit	4	DD$	F1$(13)
13	Amount of last credit	4	AC#	F1$(14)
14	Amount of last debit	4	AD#	F1$(15)
15	Current balance	4	CB#	F1$(16)

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES	
16	High balance	4	HB#	F1$(17)
17	Year to date sales	4	YS#	F1$(18)
18	Year to date payments	4	YP#	F1$(19)
19	Automatic billing amount	3	BA#	F1$(20)
	Total	128 bytes = 1 record		

Field explanations for data records

Field 1 Customer Number	Five alphanumeric characters identify each customer.
Field 2 Customer Name	Up to 24 characters identify the customer name as it appears on reports, invoices, and statements.
Field 3 Address 1	The first line of a customer address holds up to 24 characters. Since there are two address lines, suite or room numbers appear here.
Field 4 Address 2	Up to 24 characters represent the city, state, and zip code.
Field 5 Phone Number	Customer phone number in the form (XXX-YYY-ZZZZ)
Field 6 Type of Account	A character identifies the type of customer account. R is a regular account with an open invoice statement; C is a charge account with a balance forward statement; O is another account with a balance forward statement.
Field 7 Credit Terms	A character identifies the standard credit terms available to this customer. A = Net, B = Net 15, C = Net 30, D = Net 45, E = 2-10 Net 30, and F = others.
Field 8 Credit Limit	Transactions exceeding this maximum amount in dollars that a customer may owe are not accepted.
Field 9 Tax Rate	Zero or a number between 1.0 and 9.9 specifies the company's standard tax percentage (two digits only).
Field 10 Discount Rate	Two digits specify the standard discount percentage for the company.
Field 11 Date of Last Credit	The last transaction date when this customer's account was credited
Field 12 Date of Last Debit	The last transaction date when this customer's account was debited

Field 13 Amount of Last Credit	The dollar amount of this account's last credit is a payment, credit, or adjustment.
Field 14 Amount of Last Debit	The dollar amount of this account's last debit is a sale or an adjustment.
Field 15 Current Balance	Dollar amount currently owed by a customer
Field 16 High Balance	The largest balance in dollars ever reached by this account
Field 17 Year to Date Sales	Year-to-date sales to this customer
Field 18 Year to Date Payment	Year-to-date payments to this customer
Field 19 Automatic Billing Amount	Amount automatically billed to type 0 accounts

1-3-2 #A.ARCUO- Customer Recent Transaction or Open Invoice File

#A.ARCUO contains the two month "moving window" of all transactions.

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES	
			FOR	I= 0 TO 8
1	Invoice number	4	IN	F2$(I*4+2)
2	Invoice date	4	ID$	F2$(I*4+3)
3	Invoice amount	4	IA#	F2$(I*4+4)
4	Credit terms	1	CT$	F2$(I*4+5)
	Total bytes per invoice entry =	13		

Each record in #A.ARCUO has one to nine invoice entries, with a six byte tag in the account number, and two bytes number the invoices in the record, totalling 125 bytes in a full record. The remaining three bytes are not used.

FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES	
Tag or account number	6	TG	F2$(0)
Number of transaction	2	NT	F2$(1)
Total header bytes =	8		

1-3-2 #A.ARCUO- Customer Recent Transaction or Open Invoice File (continued)

Each open invoice in a customer's account is stored in a packed format to save space. Nine packed invoices, having four fields, are stored in one sector.

Field 1 Invoice Number	Five-digits from 1 to 99998 identify the invoice sent to the customer.
Field 2 Invoice Date	Effective date of the invoice
Field 3 Invoice Amount	Total dollar amount due on this invoice
Field 4 Credit Terms	A letter specifies invoice credit terms: A=Net, B=Net-15, C=Net-45, D=2-10-Net-30, F=Net-30, E=etc.

1-3-3 #A.ARCUC - Customer Current Transaction File

#A.ARCUC records have up to 13 transactions, each with three fields.

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
			FOR I=0 TO 12
1	Transaction type	1	TC$ F3$(I*3+2)
2	Transaction date	4	TD$ F3$(I*3+3)
3	Transaction amount	4	TA# F3$(I*3+4)
	Total bytes per transaction =	9	

The first two fields of a file record have an account number tag and number of record transactions, totalling 125 out of 128 bytes.

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Tag of account number	6	TG F3$(0)
2	Number of transaction	2	NT F3$(1)
	Total bytes used for the header =	8	

Each customer account transaction is packed and maintained for two months. Up to 13 transactions are stored per sector with three fields per transaction.

Field 1 Transaction Type	A digit identifies the transaction type: 1=sale, 2=payment, 3=credit, 4=adjustment, 5=reconciliation, 6=applied account service charge, 7=statement, and 8=amount billed.
Field 2 Transaction Date	Date the transaction was entered
Field 3 Transaction Amount	Total dollar amount of the transaction

1-3-4 #A.ARAA and #A.ARAO - Periodic Activity Files

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Activity entry date	4	AE$
2	Transaction type code	1	TC$
3	Activity date	4	AD$
4	Account number	6	AN$
5	Invoice number	4	IN
6	Transaction amount	4	IA# IA$
7	Freight or discount amount	4	FA# FA$
8	Tax amount	4	TA# TA$
9	Customer reference	8	RF$

A financial transaction is stored in a sector with the nine fields above. This is a BASIC random file. Periodic Activity Files (#A.ARAA, #A.ARAO), Monthly Invoice (#A.ARAI), and Payment, Credit, and Adjustment (#A.ARAP) Register Files are maintained.

PERIODIC ACTIVITY FILE (#A.ARAA, #A.ARAO)

A customer data base financial transaction is stored as a record with the nine fields above.

Field 1 Activity Entry Date	Date the transaction was entered
Field 2 Transaction Type Code	A character identifies the transaction type: S=sale, P=payment, C=credit, A=adjustment, service charge billed, and B=amount billed.
Field 3 Activity Date	Transaction's effective date
Field 4 Account Number	Five characters identify the customer account.
Field 5 Invoice Number	Five digits identify the invoice billed to a customer or an open credit invoice.
Field 6 Transaction Amount	Sale price, service charge, payment, credit, or adjustent of an invoice in dollars.*
Field 7 Freight/Discount	Freight billed, or the payment discount in dollars.*
Field 8 Tax Amount	Tax value billed on an invoice in dollars.*
Field 9 Customer Reference	Eight alphanumeric characters identify payment, credit, or adjustment.

* These fields depend on the transaction type code.

1-3-5 #A.ARAI - Invoice Register File

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Entry date	4	AE$
2	Invoice date	4	AD$
3	Account number	6	AN$
4	Invoice number	4	IN
5	Purchase amount	4	IA#
6	Freight amount	4	FA# FA$
7	Tax amount	4	TA# TA$

1-3-5 #A.ARAI - Invoice Register File (continued)

Invoices processed by the end-of-day program since the end-of-month program was run, are stored in a packed format to save space. Three invoices occupy a sector. Each invoice has seven fields.

Field 1 Entry Date	Date the invoice was entered
Field 2 Invoice Date	Effective date of the invoice
Field 3 Account Number	Five characters identify a customer account.
Field 4 Invoice Number	Five digits 0 to 99999 identify the invoice or an open credit.
Field 5 Purchase Amount	Amount of sale in dollars
Field 6 Freight Amount	Freight billed in dollars
Field 7 Tax Amount	Tax billed in dollars

1-3-6 #A.ARAP - Payment, Credit, and Adjustment Register File

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Entry date	4	AE$
2	Transaction code	1	TC$
3	Activity date	4	AD$
4	Account number	6	AN$
5	Invoice number	4	IN
6	Transaction amount	4	TA# TA$
7	Discount amount	4	DA#
8	Customer reference	8	RF$

1-3-6 Payment, Credit, and Adjustment Register File (continued)

Each payment, credit, and adjustment processed by the end-of-day routine since running the end-of-month program, is stored in a "packed" format to save diskette space. Two transactions, each with eight fields, are stored per sector.

Field 1 Entry Date	Date the transaction was entered
Field 2 Transaction Code	A character identifies the transcation type: P is payment, C is credit, and A is adjustment.
Field 3 Activity Date	Transaction's effective date
Field 4 Account Number	Five characters identify the customer account number.
Field 5 Invoice Number	Five digits 0 to 99999 identify the open invoice, or open unapplied credit.
Field 6 Transaction Amount	Payment, credit, or adjustment in dollars
Field 7 Discount Amount	Discount in dollars
Field 8 Customer Reference	Eight characters identify a customer reference. (optional).

1-3-7 #A.ARGLT - GL Interace File

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Account number	6	F1$
2	Source code	1	F2$
3	Reference	8	F3$
4	Description	24	F4$
5	Date	4	F6$
6	Amount	4	F7$
7	GL TRANSFER	12	GL$

To interface the GL System, the AR System maintains a GL Transfer File #A.ARGLT, a BASIC Random file with the following format:

Field 1 Account Number	Five digits denote a GL account. The left three denote the major account; the right two, if present, denote the subaccount or department code.
Field 2 Source Code	A character denotes the source document or system that originated the transaction (R in the AR System).

1-3-7 #A.ARGLT - GL Interface File (continued)

Field 3 Reference	Eight characters not used by the AR System
Field 4 Description	Twenty-four alphanumerics describe the transaction. The AR System describes one of nine standard transfer accounts.
Field 5 Date	Process date of the transaction that usually occurs during the AR end-of-day procedures
Field 6 Amount	Transaction debit or credit amount up to $9,999,999.99, absolute
Field 7 GL TRANSFER	GL TRANSFER string, written by GL Interface Program ensures the existence and validity of #A.ARGLT File.

#A.ARGLT is created by the GL Interface Master File Maintenance Program GLI, and is updated by the GL Transfer Program GLT. End-of-day processing updates Customer Data File #A.ARCUD and the data is stored until the GLT end-of-period processing. The GL Transfer File is then updated.

1-3-8 #A.ARLNK - Data Disk Linkage File

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	Disk drive number (data)	1	DK% VV$(1)
2	Current date	8	VD$ VV$(2)
3	Menu Pointer	1	IM
4	Program Pointer	1	IP

1-3-9 #A.ARSYS - System Parameter File

NUMBER	FIELD DESCRIPTION	FIELD WIDTH	FIELD NAMES
1	System name	24	VV$(1)
2	Diskette title/version	24	VV$(2)
3	Creation date	8	VV$(3)
4	Disk type code	1	VV$(4)
5	Company name	24	VV$(5)
6	Address 1	24	VV$(6)
7	Address 2	24	VV$(7)
8	GL present ? (Y or N)	1	VV$(8)
9	Service charge %	4	VV$(9)

1-4 RESTRICTIONS AND LIMITATIONS

The restrictions and limitations of the System are listed below.

- The System accepts only a two-digit sales tax.
- Invoicing is not tied to the data base. The user must enter all information by hand, a time consuming process.
- Certain processing programs run slow (i.e., $A.ARPAP, $A.ARIVP, $A.AREOM).
- The System is not tied into the Inventory Management System.
- The System does not print credit memos.
- For hardware restrictions refer to the PCC 2000 Accounts Receivable Software User's Manual (document number 248098), page 1-7.

1-5 COMMON ROUTINES

1-5-1 Common Routines For AR System (46000-49999)

LINE NUMBER	DESCRIPTION
46000-46050	Retrieve a record in Data File #A.ARCUD with key KE$. Initialize variables and set up arrays for customer data.
46100-46150	Retrieve a record in Customer Open Invoice File #A.ARCUO. Check if this record has the same account number as the data file retrieved. Set up an array for the number of invoices in the last record.
46200-46250	Retrieve a record in Customer Current Transaction File #A.ARCUC. Check if this record has the same account number as the data file retrieved. Set up an array for the number of transactions in the last record.
47000-47050	Create a record with the key KE$ in the #A.ARCUD File.
47500-47550	Restore the records retrieved from #A.ARCUD, #A.ARCUO, and #A.ARCUC Files by overwriting the records that were retrieved and placed in the buffer.
48000-48160	Open and establish the fields for the #A.ARCUD File.
48200-48260	Open and establish the fields for the #A.ARCUO File.
48300-48360	Open and establish the fields for the #A.ARCUC File.
49000-49040	Close file routine
49500-49510	Delete the account record from the #A.ARCUD File.
49600-49605	Delete the account records from the #A.ARCUO and #A.ARCUC Files.

1-5-2 Routines Common to all Accounting Systems (50000-59999, 65520-65529)

LINE NUMBER	DESCRIPTION
50000-50899	PROGRAM SET UP reads run-time parameters, sets up basic functions, and opens the Help File.
50900-50999	PRINT HEADING
51000-51099	ALPHANUMERIC STRING INPUT ROUTINE prohibits double quotes and accesses the Help File when "?" is input.
51200-51399	NUMERIC INPUT allows digits, a decimal point, and a "+" or "-" . It checks if the input is between a preset upper and lower bound.
51400-51499	DATE INPUT (MM/DD/YY) allows a month from 1 to 12, a day from 1 to 31, and a year from 10 to 99.
51600-51799	DOLLARS AND CENTS INPUT ROUTINE deletes "$" and allows a decimal point, and a "+" or "-".
51800-51999	YES/NO INPUT ROUTINE adds "(Y/N)?" to the prompt, and sets the YES flag to -1 or 0 when a Y or N is responded, respectively.
52000-52099	CRT OUTPUT ROUTINE clears screen, and displays message.
54000	INVALID ENTRY ERROR ROUTINE
54100-54110	SEVERE SYSTEM ERROR ROUTINE
54200	NUMBER OUT OF RANGE ERROR ROUTINE
54300	INCORRECT DATE ERROR ROUTINE
54500-54599	BASIC ERROR ROUTINE
55000-55099	PACK ROUTINE packs significant digits in unprintable string P$=key+4. The left of the string is padded to the original length. The PACK ROUTINE primarily ensures a unique ISAM file entry key.
55100-55199	UNPACK ROUTINE unpacks the string P$=key+4.
59000-59999	HELP FILE LOOKUP prints the help message.
65520	SEND ALL OUTPUT TO PRINTER
65525	SEND ALL OUTPUT TO CRT
65528	INITIALIZE PRINTER sets the logical page length equal to physical page length.
65529	SET PAPER TO TOP OF PAGE

SECTION 2

PROGRAM DOCUMENTATION

2-1 AR MENU - MAIN MENU SELECTION

2-1-1 AR MENU Data Files

#A.ARSYS, #A.ARLNK

2-1-2 AR MENU Functional Description

AR MENU displays the main menu selections, runs the date routine to change to the current date, and links the data disk to the system.

2-1-3 AR MENU Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00310-00320	Select menu.
00330-01045	Master activity menu is selected and the appropriate program is run.
01050-01070	Report generation menu is selected and the appropriate program is run.
01080-01098	Utilities menu is selected and the appropriate program is run.
01100-01140	The hard disk system utilities are implemented.
01150-01190	The floppy disk system utilities are implemented.
01200-01280	End-of-period processing menu is selected and the appropriate program is run.
01900-01920	The "Date" program is selected and run.
02000-02020	The Linkage File #A.ARLNK is written.
02100-02229	The menu routine is displayed.
10000-10370	The menu display data statement is stored.
19900-19980	Exit routine.

2-2 $A.ARCFM - CUSTOMER FILE MAINTENANCE

2-2-1 $A.ARCFM Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC

2-2-2 $A.ARCFM Functional Description

$A.ARCFM builds and maintains the Customer Account Files #A.ARCUD, #A.ARCUO, and #A.ARCUC.

2-2-3 $A.ARCFM Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00240-00310	Initialize all prompt messages.
00500-00550	Set up and open three ISAM files.
00600-00640	If a control report is desired, print heading.
00900-00930	If desired, display AR Customer File layout on the CRT.
01120-01220	Query user for the type of maintenance to be performed.
01300-01405	Verify unique account number and accept data fields in account addition. Write out the new account to the AR Customer File #A.ARCUD.
01500-01575	Verify account existence, display modifiable fields, query for the number of the field to be changed, and accept a new value and write it in the Customer Data File #A.ARCUD.
01600-01620	Change account field.
01700-01785	Delete account: verify account existence, display all fields, and allow a deletion if the balance is zero. Delete the account and open account invoice and current transactions.
19900-19970	Exit routine.
30000-30115	Query for the customer name.
30200-30215	Query for address 1.
30300-30315	Query for address 2.
30400-30415	Query for phone number.
30500-30515	Query for type of account.
30600-30615	Query for credit terms.
30700-30715	Query for credit limits.
30800-30815	Query for the tax rate.
30900-30915	Query for the discount rate.
30950-30965	Query for automatic-billing-amount.
31000-31015	Query user for account number.
32000-32310	Print the control report.
32400-32470	Display current account value.

2-3 $A.ARETS - ENTER SALES PROCESSING

2-3-1 $A.ARETS Data Files

#A.ARCUD, INV

2-3-2 $A.ARETS Functional Description

$A.ARETS records the invoiced sales in the Periodic Activity Files and the Customer Account Files. Temporary File INV passes all pertinent information to the $A.ARIVP Program for invoice processing. INV is deleted after the invoices have been processed.

2-3-3 $A.ARETS Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00400-00407	Set up format codes.
00500-00507	Set up and open ISAM File #A.ARCUD; initialize variables.
00510-00515	Open Temporary File INV. Set date from the system. If invoices are to be printed, set the Invoice Flag.
00530-00538	Query for speed or regular input method.
00540-00570	Query for first invoice number. Display speed input format. Enter invoice date, account number, sale amount, freight amount, and credit terms for ten invoices.
00571-00585	Query for any changes. Enter changes and write corrected invoice.
00700-00798	Enter invoice information in speed entry mode.
00800-00898	Begin processing here if regular entry mode was selected. Query for all information to be printed on invoices.
00900-00912	If invoices are to be printed, give control to the printer, print, return control to terminal and increment line counter.
00915-01130	Input additional invoice information.
01400-01420	Query for more invoices.
01430	Call Invoice Processing Program $A.ARIVP.
01500-01530	Print invoice headings.
01600-01615	Space to the bottom of the invoice and print all totals.
02100-02210	Write invoice information in the INV File.
02400-02418	Query for tax rate and calculate new rate, if selected.
02500-02505	Temporarily save all invoice data.
02600-02625	Query for discount rate and check for errors.

2-3-3 $A.ARETS Code Breakdown (continued)

02700-02710	Print invoices on the control report.
03300-03305	Print credit terms.
19900-19970	Exit routine to the main menu.
32000-32020	Display invoice format on the CRT.
33000-33020	Print the invoice heading on the control report.
34000-34090	Enter invoice information in the regular input mode.
35000-35005	Print out invoice information.
37000-37005	Search for invoice number to be changed when using the speed input mode.

2-4 $A.ARIVP - INVOICE PROCESSING

2-4-1 $A.ARIVP Data Files

#A.ARAA, #A.ARCUD, #A.ARCUO, #A.ARCUC, INV

2-4-2 $A.ARIVP Functional Description

$A.ARIVP processes all invoices entered with the $A.ARETS Program using the Temporary File INV. If desired, invoices can be printed.

2-4-3 $A.ARIVP Code breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00390-00505	Format codes, set up special messages, and open files.
00510-00605	Query for control report and zero all GL totals for the current period.
00606-00625	Open Input and Output Files.
00626-00627	Check for negative number entered (freight, tax, invoice amount). Check for valid credit term code (A-F).
00628-00630	Determine if invoice puts customer over credit limit.
00632-00634	Check if invoice total is zero, or if tax amount is greater than invoice amount.
00635-00670	Add open invoice entry and the current transaction entry to customer account. Then update current balance, YTD sales, date of last debit, amount of last debit, and high balance.
00680-00685	If control report is desired, list invoices on the report, close all files, and kill the Temporary File INV.

2-4-3 $A.ARIVP Code Breakdown (continued)

00700-00780	If invoice amount is zero, check tax amount, freight amount, update current balance, and credit amount. Insert total invoice amount in the record string.
02000-02002	Read Temporary File INV.
02200-02205	Print control report heading.
02300-02315	Print terminal or printer error messages.
02700-02710	List the invoices on the control report.
03000-03015	Add invoices to Current Daily Activity File #A.ARAA.
04900-04920	Check whether there are more invoices to be processed.
19900-19970	Exit routine to the main menu.
32000-32020	Print control report heading.

2-5 $A.ARETP - PAYMENTS, CREDITS, AND ADJUSTMENTS

2-5-1 $A.ARETP Data Files

PAY

2-5-2 $A.ARETP Functonal description

$A.ARETP processes all payments, credits, and adjustments applied to invoices entered in the $A.ARETS Program. The Temporary PAY File passes all pertinent data to the $A.ARPAP Payment Processing Program, and is deleted after transactions are processed. All related files are updated by this program.

2-5-3 $A.ARETP Code breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00405	Set up format codes.
00543-00568	Initialize variables, set up data statements, open Temporary PAY File for transactions, display speed entry format.
00570-00575	Input transactions in speed mode, prompt for a "ready" for postng.
00576-00579	Prompt for any changes, reenter transactions, redisplay current group of transactions, and check for the existence of the entered transaction.
00580-00590	Save the current group of transactions in the Output File, then run the Payment Processing Program $A.ARPAP.
00700-00765	Enter transaction data in the speed entry mode.

2-5-3 $A.ARETP Code breakdown (continued)

02100-02505	Write transaction data to Transaction PAY File and temporarily save all transaction data.
02600-02615	Print the transactions on the control report.
19900-19970	Exit routine.
32000-32020	Print the control report heading.
37000-37005	Search list of transactions already entered for the number of transactions to be changed.

2-6 $A.ARPAP - PAYMENT PROCESSING

2-6-1 $A.ARPAP Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC, #A.ARAA, PAY

2-6-2 $A.ARPAP Functional Description

$A.ARPAP processes all transactions entered with the $A.ARETP Program, and updates the Customer Data Files and Periodic Activity Files.

2-6-3 $A.ARPAP Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00390-00510	Initialize all values and special messages and open all input and output files.
00602-00604	If a control report is desired, print its heading.
00606-00620	Open Temporary PAY File and Current Periodic Activity File. Read next transaction from Temporary PAY File.
00623-00625	Initialize variables and search data base for the cus-account number.
00628-00634	Check for possible error conditions.
00635-00642	Retrieve the remaining portions of the customer account.
00644	Create transaction for the invoice being processed.
00646	Update current balance, date of last debit, credit, and amount.
00647-00650	Update YTD payments, and save them in the Current Periodic Transaction File #A.ARAA.
02000-02003	Read all transactions from Temporary PAY File and kill PAY.

2-6-3 $A.ARPAP Code Breakdown (continued)

02200-02210	Print transactions for control report.
02300-02415	Print special report for the control report.
03000-03015	Add transaction to Current Periodic Transaction File #A.ARAA.
19900-19970	Exit routine to the main menu.
21000-21900	If this invoice's balance is zero, process payment for entered invoice number.
22000-22010	If payment exceeds amount owed, reconcile open credit.
23000-23010	Make an adjustment.
24000-24900	Create open credit invoice for any payment exceeding amount owed.
25000-25010	Process credit for open credit invoice.
26000-26040	Process open credit reconciliation invoice adjustment.
27000-27050	Process payment for invoice entered, subtract from invoice amount, and update all appropriate entries.
27800-27900	Enter the new invoice amount in the record.
28000-28010	Process credit and update the invoice entry.
29000-29030	Process adjustment and update the invoice entry.
32000-35000	Print the Control Report heading.
35005-35310	Begin the actual processing of the transactions.
35400	Subtract the transaction amount from the total amount due on the invoice. Remove invoice or set up new invoice.
35500-36005	Print special message on the Control Report.
37000-37005	Check whether the oldest invoice number is zero. Print invoice on the Control Report.
38000-39000	Check whether the customer has open credits.

2-7 $A.ARRPG - REPORT GENERATION (PART 1)

2-7-1 $A.ARRPG Data Files

#A.ARCUD #A.ARCUO

2-7-2 $A.ARRPG Functional Description

$A.ARRPG generates the AAR Aged Accounts Receivable Report and the CCA Current Customer Accounts Report.

2-7-3 $A.ARRPG Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00400	Set up format codes.
01005-01050	Query for terminal or printer output, then print heading.
03000-03020	Set up and open files for Aging Report.
03021-03022	Translate invoice date to absolute date and clear all periodic totals.
03024-03058	Check for EOF, no open invoices, validity of the account, and if the information will fit on the page. Update the proper periodic totals for the account, then print totals on report.
03060-03080	Print periodic totals for the entire data base.
03100-03135	Print heading for the Aging Report.
03200-03202	Check for next open invoice for the account, translate invoice date to absolute date, and compare with current date.
03203-03215	Print invoice information and aged invoices with amounts in the proper columns.
03999	Terminate program by branching to 19900.
04000-04005	Handle errors.
06000-06055	Open files, set total balance due and total number of accounts to zero, and print customer information. Increment the total number of accounts, and add the current account balance to the running total in the current customer accounts listing report.
06060-06130	Print Current Customer Accounts Listing Report heading.
19900-19970	Exit routine.
39000-39030	Translate invoice date to absolute date.

2-8 $A.ARRG2 - REPORT GENERATION (PART 2)

2-8-1 $A.ARRG2 Data Files

#A.ARAA, #A.ARAI, #A.ARAP, #A.ARAO, #A.ARCUD

2-8-2 $A.ARRG2 Functonal Description

$A.ARRG2 generates reports for Periodic Activity PACT, invoice registers IVR, and payment, credit, and adjustment registers PCR. $A.ARRG2 $A.ARRG2 clears invoice registers, payment, credit and adjustment registers, or monthly totals.

2-8-3 $A.ARRG2 Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00400-00405	Set up format codes, report code, and check for valid report code.
01005-01050	Query whether the report is to be printed on the terminal or the printer, then print the heading.
02000-02004	Print the report heading.
02005-02017	Open Daily Activity File #A.ARAA for input. Clear all GL account totals. Read the number of transactions from the header record.
02020-02025	Read the next transaction from the Activity File.
02026-02027	Check transaction date to see whether it equals the previous date. It is always different the first time.
02028	Determine the transaction type.
02030-02038	Print transaction data. Update the adjustment account and the accounts receivable account.
02040-02048	Print transaction data for payments. Update cash payment, discount taken, and AR accounts.
02050	Print transaction data for sales.
02052-02058	Update GL account for invoiced sales, freight charged, tax charged, and AR.
02060-02063	Print transaction for credit. Update credit/return and AR accounts.
02080-02095	Print transactions, update invoiced sales, month-to-date value, and GL summary for the period just processed.
02096-02099	Clear monthly total, if desired, in the #A.ARCUD File.
02100-02120	Print report heading.
02200-02208	Print service charge transaction data. Update invoiced sales and AR accounts.
02300-02308	Print amount-billed transaction data. Update invoiced sales and AR accounts.
02400-02580	Print updated current activity GL account data.

2-8-3 $A.ARRG2 Code Breakdown (continued)

03000-03040	Open Invoice Register File #A.ARAI, check number of invoices in the file, and set totals to zero. Print invoice data and update totals.
03085-03096	Print total for the invoice registers.
03500-03515	Unpack the correct invoice from the record.
04000-04020	If desired, clear invoice register, and payment, credit, and adjustment registers.
05000-05002	Initialize variables.
05005-05015	Open payment, credit, and adjustment Register File #A.ARAP.
05020-05040	Print transaction data and update totals.
05080-05096	Print payment, credit, and adjustment data.
19900-19970	Exit routine to the main menu.
05500-05515	Unpack the correct invoice from the record.
06000-06005	Print the transaction type.

2-9 $A.ARSTG - STATEMENT GENERATION

2-9-1 $A.ARSTG Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC

2-9-2 $A.ARSTG Functional Description

$A.ARSTG prints single or all customer account statements on accounts with non-zero balance only.

2-9-3 $A.ARSTG Code Breakdown

LINE NUMBER	DESCRIPTON
00000-00004	Set up program.
00100-00425	Open Input File and do other initialization activites.
00500-01050	Query for statement to be printed.
02000-02055	Continue here to print a single customer statement.
03000-03305	Continue here to print all customer statements.
04000-04005	Generate statements for non-zero balance customers.
05000-05098	Print statement(s) for regular customers.
05100-05165	Print statement(s) for credit or other customers.
10000-10001	Accept a string of messages to appear on the statement.
19900-19970	Exit routine.

2-10 $A.ARQUE - QUERY CUSTOMER ACCOUNT STATUS

2-10-1 $A.ARQUE Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC

2-10-2 $A.ARQUE Functional Description

$A.ARQUE prints a Control or a Terminal Report for account(s) chosen by the user.

2-10-3 $A.ARQUE Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00300-00430	Open files, and set up arrays for transaction and credit types.
00470-00520	Query for account number and verify if account is valid.
00530-00548	Query for output on terminal or printer.
00550-00640	Print customer account status.
00645-00650	Check if open invoice, current transaction is present.
00655-00678	Verify if customer account status data fits on remainder of page. Increment transaction and open invoice counter.
00680-00690	Check if all accounts are to be queried. Query for any more account to be displayed.
00700-00705	Print open invoices.
00750-00765	Print current transactions.
01000-03305	Print the heading and credit terms.
19900-19970	Exit routine to the main menu.

2-11 $A.AROCR - OPEN CREDIT RECONCILIATION PROCESSING AND END-OF-YEAR PROCESSING

2-11-1 $A.AROCR Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC

2-11-2 $A.AROCR Functional Description

$A.AROCR applies open credit balance to an invoice in the customer account. The end-of-year process is also part of this program. EOY prints a year total report, then clears all year-to-date totals.

2-11-3 $A.AROCR Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00100-00107	Initialize variables and format codes, and check for memory location of program to determine if error has occurred.
00108	Terminate if type is not matched.
00110-00120	Set up error message, credit terms, and transaction type arrays.
00400-00405	If a control report is desired, print heading.
02005-02040	Set up and open three ISAM files. Verify that the account to be reconciled is valid.
02045-02065	Check for a customer open credit invoice or any open invoice. Display credit or open invoice on the terminal.
02066-02090	Remove invoice if its amount equals open credit amount. If not, subtract invoice amount from open credit amount and set up a new open credit invoice with a new amount.
02200-02205	Search data base for open credit.
02300-02305	Display open invoice on the terminal.
02500-02505	Print credit type.
02600-02650	Verify that selected invoice exists, and that the amount reconciled is not greater than the remaining open credit amount. Remove invoice and display remaining open credit amount.
03000-03090	Process end-of-year.
03100-03150	Print the end-of-year process heading.
03160-03190	Print the year total on the report and reset all year-to-date fields.
19900-19970	Exit routine to the main menu.
32000	Print the heading on the control report.
33000-33005	Display message after entering open credit data.
35000-35020	Verify that the amount reconciled is not greater than the remaing open credit amount. Remove invoice and compute the remaining open credit amount.
36000-36010	Process control report.
37000-37005	Remove the invoice.

2-12 $A.AREOD - END-OF-DAY PROCESSING

2-12-1 $A.AREOD Data Files

#A.ARAA, #A.ARAO, #A.ARAI, #A.ARAP, #A.ARCUD

2-12-2 $A.AREOD Functional Description

$A.AREOD enters all current transactions to the Customer Data File #A.ARCUD. This calculates the monthly and GL account totals and enters them in the first record of Customer Data File #A.ARCUD. The Current Periodic Transaction File #A.ARAA is renamed to #A.ARAO then recreated to hold all subsequent transactions entered.

2-12-3 $A.AREOD Code Breakdown

LINE NUMBER	DESCRIPTIONS
00000-00004	Set up program.
00100-01100	Initialize variables; print end-of-day process heading.
01110-01120	Open Current Periodic Activity File #A.ARAA and determine current file transaction. If none, GOTO 3048.
02000-02308	MTD update establishes the field for the Current Periodic File. Zero all GL variables. Read the record in the Current Periodic Activity File then update the GL entries until all transactions are processed.
02500-02565	Open Customer Data File #A.ARCUD. Update the monthly totals in the first record.
02570-02700	Update the GL totals in the first record then close the #A.ARCUD File.
03028-03410	Update Invoice Register File #A.ARAI, and the Payment, Credit, and Adjustment Register File #A.ARAP. Delete the #A.ARAO File, rename #A.ARAA as #A.ARAO, and recreate the #A.ARAA File. Print the end message.
19900-19970	Exit routine to the main menu.

2-13 $A.AREOM - END-OF-MONTH PROCESSING

2-13-1 $A.AREOM Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC, #A.ARAA

2-13-2 $A.AREOM Functional Description

$A.AREOM computes service charge and automatic billing amount for the proper accounts then updates the Current Transaction File, Customer Open Invoice File, and Customer Recent Transaction File.

2-13-3 $A.AREOM Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00097-04010	Read from data statements, and print messages.
04015-04029	Open Current Periodic Activity File #A.ARAA and read customer account record.
04030-04120	Perform functions to account, depending on account types.
04175-04180	Terminate program and print message.
04600-04615	For regular accounts, determine all transactions that are dated two months earlier than the current date.
04650-04660	Check for latest statements of charge and other accounts.
04670-04680	Remove transactions dated two months before current date.
04700	Process all transactions.
04720-04735	Enter routine after scanning the transactions or after finding the service charge.
04740-04795	Compute service charge with rate in the #A.ARSYS File.
04800-04830	Add AUTOMATIC-BILLING-AMOUNT to other accounts and update the customer record.
04900-04905	Search transactions for service charge. IA# will be the service charge if any are found.
04950-04965	Add the service charge to the bottom of Current Transaction File #A.ARAA.
19900-19970	Exit routine to the main menu.
39000-39030	Breakdown and change transaction date to a unique number for calculating service charges.

2-14 $A.ARGLI - GL INTERFACE MAINTENANCE

2-14-1 $A.ARGLI Data Files

#A.ARGLT

2-14-2 $A.ARGLI Functional Description

$A.ARGLI initializes the GL Transfer File #A.ARGLT and writes GL TRANSFER, a 12 byte string in the #A.ARGLT File that validates the GL Transfer File.

2-14-3 $A.ARGLI Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00004	Set up program.
00500-00533	Query for help, and whether to update or create.
00535-01025	Print header record, account number and description, and display current account number. Prompt for new values; retain old values.
02000-02040	Open Transfer File #A.ARGLT, read in all account numbers, and close the file.
19900-19970	Exit routine to the main menu.
40000-41010	Set up account descriptions.

2-15 $A.ARGLT - GENERAL LEDGER TRANSFER

2-15-1 $A.ARGLT Data Files

#A.ARGLT, #A.ARCUD

2-15-2 $A.ARGLT Functional Description

$A.ARGLT transfers GL accounts to the GL File #A.ARGLT, which transfers the GL accounts to the GL System.

2-15-3 $A.ARGLT Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
04000-04115	Open and establish the field for #A.ARGLT File.
04120-05010	Open #A.ARCUD File and retrieve records for GL accounts.
19900-19970	Exit routine to the main menu.

2-16 $A.ARSYS - SYSTEM PARAMETER SET UP

2-16-1 $A.ARSYS Data File

#A.ARSYS

2-16-2 $A.ARSYS Functional Description

$A.ARSYS sets up system parameters and updates or creates the #A.ARSYS File.

2-16-3 $A.ARSYS Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
01100-01160	If necessary, process disk change subject to specified drive.
02000-02010	Query to create or update file.
04000-05660	Create or update the #A.ARSYS File.
05700-05799	Accept and verify input according to the query.
05800-05859	Print header on CRT terminal.
05900-05999	Initialize query printout on the CRT.
19900-19930	Exit routine.

2-17 $A.ARLNK - LINKAGE FILE MAINTENANCE

2-17-1 $A.ARLNK Data Files

#A.ARLNK

2-17-2 $A.ARLNK Functional Description

$A.ARLNK links data disk to system disk for storage and processing.

2-17-3 $A.ARLNK Code breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
01100-01160	Process disk change subject to specified drive, if needed.
02000-02010	Query to create or update Linkage File #A.ARLNK.
04000-05660	Create or update the Linkage File #A.ARLNK.
05700-05799	Accept and check input according to the query.
05800-05859	Print heading on CRT.
05900-05999	Initialize query messages.
19900-19930	Exit routine.

2-18 $A.ARCRE - DATA FILE CREATION

2-18-1 $A.ARCRE Data Files

#A.ARCUD, #A.ARCUO, #A.ARCUC, #A.ARAA, #A.ARAO, #A.ARAI, #A.ARAP

2-18-2 $A.ARCRE Functional Description

$A.ARCRE creates all data files used in the AR System.

2-18-3 $A.ARCRE Code Breakdown

LINE NUMBER	DESCRIPTION
00000-00100	Set up program.
01100-01160	Process disk changes according to the specified drive, if needed.
06000-06310	Create all data files.
19900-19930	Exit routine.

SECTION 3

SORTED CROSS-REFERENCE AND VARIABLE DEFINITION

3-1 AR MENU

3-1-1 AR MENU Variable Description

Variable	Description
DK%(	Disk drive location where program is loaded
M$	Description of P$
M$(	Menu
MM$	Description of menu selection
NM	Value of menu selection minus one
NM$	Menu selection mnemonics
P$	Main menu selection
PN$	Program name
PP$	Menu headings (holds PN$)
RA	Flag
SC$	Name of company which owns the system
TP$	Menu selected

3-1-2 AR MENU - Variable Cross Reference

Variable	References
#1	2010
DK$	2010
FS	310
I	1014, 1056, 1058, 1060, 1070, 1086, 1089, 1092, 1105, 1106, 1108, 1110, 1120, 1130, 1135, 1140, 1160, 1164, 1166, 1168, 1170, 1180, 1190, 1215, 1220, 1225, 1250, 1260, 1270, 1280, 2122, 2226
IM	320, 1058, 1062, 1089, 1095, 1220, 1230, 2010
IP	1058, 1089, 1220, 2010
M$	2118
M$(	2120, 2122, 2226
MM$	2116, 2124
N1$	2000
NM	1014, 1056. 1086, 1215, 2116, 2120, 2122, 2226
NM$	2116
P$	2118
P$(	1014, 1058, 1089, 1220, 2120, 2122, 2226
PN$	2108, 19950
PP$	330, 1050, 1080, 1200, 2108, 2114
Q	1010, 1054, 1084, 1210, 1900
Q$	1000, 1052, 1082, 1205, 1900, 2000, 2010
QT	1010, 1054, 1084, 1210, 1900

3-1-2 AR MENU - Variable Cross Reference (continued)

Variable	References
R$	1012, 1013, 1014, 1058, 1062, 1089, 1095, 1220, 1230, 1920
RA	2118, 2120
RL	1910
SC$	2108
TP$	2114
VD$	1920, 2010
VT$	1080, 1100

3-2 $A.ARCFM

3-2-1 $A.ARCFM Variable Description

Variable	Description
A1$	Customer address (one of two)
A1$(	Array for customer address
A2$	Customer address (two of two)
AC#	Amount of last credit
AD#	Amount of last debit
AN$	Account number
BA#	Automatic billing amount
BE$	Bell on terminal
C1$-CA$	Holds prompt messages
CB#	Current balance
CL#	Credit limit
CN$	Customer name
CT$	Credit terms
D#	Dollar amount entered
DC$	Date of last credit
DD$	Date of last debit
DK%(	Disk drive
DR	Discount rate
ER%	Error indication if non-zero
FC	Field counter
FI%	File number
HB#	High balance
KEY$	Record key
LB!	Lower bound for N!
LC	Line counter
LP	If true, output to lineprinter.
LV$	Set to customer name
N!	Number returned from number query routine
NF%	Number of files
PC%	Flag for beginning another page
PH$	Customer phone number
TA$	Type of account
TR	Tax rate
UB!	Upper bound for N!
YP#	Year-to-date payments
YS#	Year-to-date sales

3-2-2 $A.ARCFM - Variable Cross Reference

Variable	References
A1$	30215, 32110, 32425
A1$(	310
A2$	30315, 32115, 32430
AC#	1375
AD#	1375
AN$	1320, 31015, 32105, 32205, 32305, 32415
BA#	30950, 30965, 32138, 32462
BE$	1730
C1$	245, 30000, 32415
C2$	250, 30100, 32420
C3$	255, 30200, 32425
C4$	260, 30300, 32430
C5$	265, 30400, 32435
C6$	270, 30500, 32440
C7$	275, 30600, 32445
C8$	280, 30700, 32450
C9$	285, 30800, 32455
CA$	290. 30900, 32460
CB#	1375, 1730
CB$	295, 30955, 32462
CE$	310, 30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 30955
CL#	30715, 32125, 32450
CN$	30115, 32110, 32420

3-2-2 $A.ARCFM - Variable Cross Reference (continued)

Variable	References
CT$	30615, 32120, 32445
CV$	310, 32415, 32420, 32425, 32430, 32435, 32440, 32445, 32450, 32455, 32460, 32462
D#	30710, 30715, 30960, 30965
DC$	1370
DD$	1370
DR	30915, 32135, 32460
ER%	530, 1315, 1520, 1715, 1770, 1775
FC	1120
FI%	1770, 1775
FS	240, 1370, 1620, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 30955
HB#	1375
I	31010, 32400, 32465
KEY$	1320
LB!	1605
LC	1570, 32025, 32100, 32138, 32140, 32200, 32210, 32300, 32310
LP	640, 1395, 1550, 1570, 1755, 19915
LV$	30115, 30215, 30315, 30415, 30515, 30615, 30715, 30815, 30915, 30965, 32205
!!	1612, 1615, 32200, 32205
NF%	530
PC%	1388, 1535, 1612
PH$	30415, 32115, 32435

3-2-2 $A.ARCFM - Variable Cross Reference (continued)

Variable	References
PN$	19950
Q	605, 640, 910, 930, 1135, 1385, 1560, 1605, 1745, 19960, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 30955, 31000
Q$	600, 640, 900, 1130, 1380, 1505, 1555, 1600, 1705, 1740, 19960, 30000, 30100, 30200, 30300, 30400, 30500, 30600, 30700, 30800, 30900, 30955
QT	605, 640, 910, 1135, 1385, 1560, 1605, 1745, 31000
R$	640, 30115, 30215, 30315, 30400, 30415, 30508, 30515, 30608, 30615, 30808, 30815, 30910, 30915, 31005, 31010, 31015, 32205
RL	1610, 30400, 30508, 30608, 30808, 30910
RL$	1160, 1180, 1200, 1210, 30608
TA$	30515, 30950, 32120, 32138, 32440, 32462
TR	30815, 32130, 32455
TS	240
UB!	1605
YES	930, 1390, 1565, 1750
YP#	1375
YS#	1375

3-3 $A.ARETS

3-3-1 $A.ARETS Variable Description

Variable	Description
AN$	Account number
BU$(	Used to retrieve company name
CR$	String of 128 bytes used to pass parameters to the program
CT$	Credit terms
D#	Print buffer for input values
DA#	Discount amount
DF$	Holds T, N, or B for taxing
DI%	Disk drive
DK%	Disk drive that stores the program
DR	Standard discount rate
DS%	Flag for discount applied
E%	End of transaction entries
ER%	Error Flag
EX$	Extra tax
F3$	Formatted string for print using statement
FA#	Freight amount
FF$	Total on the invoice
FI%	File number
FS	Field size
FS$	Formatted string for sub-total
FT$	Formatted string
IA#	Invoice amount
ID$	Date
IN	Invoice number
IO$	Internal order number
IT#	Invoice total
IV%	Flag indicating that invoice is to be printed
KE$	Account number
KK	Total number of transactions
LB!	Lower bound
LC	Line counter
MM$	Holds special message
N!	Returns number entered in Query
NA$	File name
NB%	Number of buffers
NF%	Number of files
PN$	Program name
PO$	Customer purchace order number
Q9	Set to invoice number

3-3-1 $A.ARTES Variable Description (continued)

RI	See 'Query' Subroutine
RL$	Used to hold query
S%	Erases E%
SC$	Clear screen codes
SM$	Shipping method
SN$	Salesman number
TA#	Tax amount
TF%	Tax Flag
TI$(	Used to hold the invoice entered
TR	Tax rate
TS	Tag size (account number)
TX%	Non-Taxable Item Flag
UB!	Upper bound
VD$	Date
X1(	Used to hold invoices
XA#	Extra amount
XF%	Additional Tax Flag
XR	Additional tax rate
XT%	Extra Tax Flag

3-3-2 $A.ARETS - Variable Cross Reference

Variable	References
#5	510, 2100
AN$	720, 865, 2500
BU$	870
CR$	870, 875, 887, 935, 1000, 1515
CT$	760, 887, 889, 1525, 2505, 3300
D#	730, 740, 750, 1030, 1100, 2418, 2618, 34025, 34030, 34040
DA#	560, 912, 940, 1010, 1110, 1605, 2500, 2618, 2620
DE$	34020, 35000
DF$	828, 845, 940, 1603
DF%	940, 2600, 2618, 2620
DI%	500
DK%	500, 510
DN#	34040, 34042, 34045, 35000
DR	935, 940, 2618
DS%	825, 930, 1603, 1605
E%	515, 570, 585, 708, 800, 880, 922
EI%	915, 925, 34005
ER%	500, 870
EX$	505, 2500, 2505, 37000
F3$	406, 1605, 1606
FA#	740, 912, 1100, 1110, 1605, 2505
FF$	405, 918, 929, 1602, 1607, 2700, 34045, 35000

3-3-2 $A.ARETS - Variable Cross Reference (continued)

Variable	References
FI%	500
FS	400, 705, 715, 725, 735, 745, 755, 798, 880, 34000, 34010, 34020, 34025, 34035, 34090
FS$	405, 750, 2700, 2705
FT$	407, 35000
I	503, 507, 720, 860, 1510, 1515, 1520, 2700, 2705, 2710
I2#	560, 912, 925, 929, 940, 1110, 1602, 2500, 2620
IA#	730, 750, 912, 915, 918, 940, 1005, 1035, 1110, 1602, 2500, 2620
ID$	710, 712, 880, 882, 1513, 2500
II	1600
IN	543, 544, 570, 572, 700, 797, 878, 1511, 2200, 2500, 37000
IO$	883, 1525
IT#	1110, 1607
IV%	800, 903, 915, 916, 921, 925, 928, 1125, 1500, 1600, 35000
J	578, 1400, 2100
JK	570, 572, 574, 1400, 2500, 2505, 37000, 37005
K$	1000
KE$	865
KK	570, 578, 2100, 2700, 37000
LB!	540, 543, 572, 878, 1030, 2418, 2618

3-3-2 $A.ARETS - Variable Cross Reference (continued)

Variable	References
LC	903, 915, 916, 921, 925, 928, 1530, 1600, 1610, 35005
LD$	510, 710, 712, 880, 882
MM$	912, 922, 33000
N!	540, 543, 572, 878, 1030, 2418, 2618, 34015
NA#	915, 925, 34045, 35000
NA$	500
NB%	500
NF%	500
PA$	34000, 35000
PN$	1440, 19950
PO$	885, 1525
Q	535, 540, 543, 544, 545, 550, 571, 572, 705, 715, 800, 805, 812, 820, 835, 850, 875, 878, 880, 883, 885, 886, 887, 888, 890, 900, 902, 920, 1020, 1030, 1100, 1130, 1405, 1505, 2405, 2418, 2605, 2618, 34000, 34010
Q$	530, 540, 543, 544, 550, 571, 572, 705, 800, 803, 812, 815, 830, 850, 875, 878, 880, 883, 885, 886, 887, 888, 890, 900, 902, 920, 1020, 1025, 1100, 1130, 1405, 1415, 1505, 2405, 2415, 2605, 2615, 34000
Q9	544, 570, 797
QT	535, 540, 543, 544, 550, 705, 715, 725, 735, 745, 755, 798, 800, 805, 812, 820, 835, 850, 887, 888, 900, 920, 1020, 1030, 1100, 1130, 1405, 1415, 1505, 2405, 2418, 2605, 2618, 34000, 34010, 34020, 34025, 34035, 34090

3-3-2 $A.ARETS - Variable Cross Reference (continued)

Variable	References
QU	34015, 34045, 35000
R$	538, 710, 720, 840, 860, 865, 880, 883, 885, 886, 887, 888, 890, 1025, 1030, 2410, 2415, 2418, 2610, 2615, 2618, 34000, 34005, 34020
RI	705, 798, 878, 880, 34000, 34090
RL	540, 543, 572, 710, 720, 730, 740, 750, 760, 855, 878, 880, 889, 34015, 34030, 34040
RL$	760, 845, 889
S%	573, 708, 797
SC$	912, 921
SM$	890, 1527
SN$	886, 1525
T9$	37000
TA#	750, 912, 1005, 1010, 1110, 1605, 2418, 2505
TF%	1005, 2400, 2418
TI$(	507, 2100, 2500, 2505, 2700, 2705, 37000
TR	1000, 1005, 2418
TS	400
TX#	540, 750
TX%	810, 828, 920
TZ	540, 750
UB!	540, 543, 572, 878, 1030, 2418, 2618

3-3-2 $A.ARETS - Variable Cross Reference (continued)

Variable	References
UP#	34030, 34042, 34045, 35000
VD$	510
X1(	503, 2100
XA#	912, 1030, 1035, 1110, 1606, 2505
XF%	1015, 1030, 1035
XR	1030, 1035
XT%	813, 1015, 1604, 1606
YES	544, 571, 800, 810, 813, 825, 875, 900, 920, 1130, 1410, 1420

3-4 $A.ARIVP

3-4-1 $A.ARIVP Variable Description

Variable	Description
AC#	Amount of last credit
AD#	Amount of last debit
CB#	Current balance
CL#	Credit limit
CR$	First 128 bytes of Current Periodic Activity File #A.ARAA
CT$(	Array that holds credit terms for a particular transaction
DC$	Date of last credit
DD$	Date of last debit
DK%	Disk drive
EC%	Error code
EM$(	Array that holds error message
ER%	Error indication if non-zero
FA#	Freight amount
FF$	Format for printing the invoice total
FS$	Format for printing the freight total
GF#	GL freight
GI#	GL service charge income
GS#	GL sales
GT#	GL tax
HB#	High balance
IA#	Invoice amount
ID$	Set to date entered in system
IN	Invoice number
IT#	Invoice total
LC	Line counter
LP	If true, output to line printer.
NF%	Number of files
NV$	String that holds the number of invoices in #A.ARAA File
OI$(	Array that holds open invoices
PN$	Program name
TA#	Tax amount
TI	Total invoices
TI$(	Temporary string in the Temporary File INV to hold invoices
TS	Tag size
TT	Total transactions
VD$	Date entered in the system
VT$	Invoice terms
YS#	Year-to-date sales amount

3-4-2 $A.ARIVP - Variable Cross Reference

Variable	References
#4	610, 615, 3000, 3005
#5	610, 2000
AC#	770
AD#	646
AN$	2001, 2200, 3000
CB#	630, 646, 770
CL#	630
CR$	3000
CT$(	644, 760
DC$	770
DD$	646
DK%	610, 685
E	626
EC%	625, 626, 627, 630, 632, 634, 635, 636, 700, 710, 720, 730, 2303
EF%	620, 2003
EM$(	408, 410, 415, 420, 425, 428, 2303
ER%	505, 510, 625
F%	636, 720, 4900, 4910
FA#	626, 628, 647, 710, 730, 740, 2001, 2200, 3000
FF$	405, 2200, 2705
FNDI$(	642, 644, 740, 760, 3000
FNID#(	4910

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

Variable	References
FNSD!(	642, 644, 760
FS	405
FS$	405, 2200, 2705
GF#	605, 647, 2705
GI#	605, 647, 2705
GS#	605, 647, 2705
GT#	605, 647, 2705
HB#	646
I2#	730, 740, 4910
IA#	626, 628, 634, 647, 2001, 2200, 3000
ID$	405, 642, 644, 2001, 2200, 3000
ID%	740, 4910
II	2303, 2308
IN	642, 2001, 2200, 3000, 4910
IT#	647, 700, 2001, 2200
J	630
KK	2000
LC	604, 638, 750, 2200, 2300, 2305, 2710, 32020
LP	604, 638, 640, 680, 750, 755, 2300, 2310, 2700, 19915
NF%	500
NV$	615, 680
NV%	615, 680, 3005

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

Variable	References
OI$(	642, 740, 4910
PN$	19950
Q	602, 604, 19960
Q$	602, 604, 19960
QT	602, 604
R$	604
TA#	626, 628, 634, 647, 710, 730, 740, 2001, 2200, 3000
TI	635, 642, 4900, 4910
TI$(	2000, 2001
TS	405
TT	635, 644, 760
TT#	628, 630, 632, 642, 644, 646, 700, 760, 770
VD$	405, 646, 760, 770, 3000
VT$	627, 642, 700, 2001, 2200
YS#	646

3-5 $A.ARETP

3-5-1 $A.ARETP Variable Description

Variable	Description
AN$	Account number
D#	Dollar value entered
DK%	Disk drive
DT#	Discount taken
E%	End of transaction entries
EX$	Ten byte string used to pass parameters to the programs
FF$	Formatted string to print total
FS	Field size
FS$	Formatted string
LB!	Lower bound for N!
N!	Returns number from query
PN$	Program name
RF$	Customer reference
RL	Returns length of characters entered in query
TA#	Transaction amount
TC$	Transaction code
TD$	Transaction date
TP$(	Temporary string to hold transactions
TS	Tag size
UB!	Upper bound for N!
VD$	System date

3-5-2 $A.ARETP - Variable Cross Reference

Variable	References
#5	568, 2100
AN$	576, 715, 2500, 37000
D#	745, 755
DK%	568
DT#	747, 755, 2500
E%	571, 585, 703
EX$	560, 2500, 37000
FF$	405, 2600, 2605
FS	405, 700, 710, 720, 730, 740, 750, 760, 770
FS$	405
I	560, 567, 576, 715, 2600, 2605, 2610, 2615
IN	578, 735, 2500, 37000
J	582, 2100
JK	570, 571, 574, 579, 2500, 37000, 37005
KK	2100
KL	571, 574, 582, 2600, 37000
LB!	578, 730
N!	578, 735
PN$	19950
Q	543, 545, 550, 575, 576, 577, 578, 700, 19960
Q$	543, 550, 575, 576, 577, 578, 700, 19960

3-5-2 $A.ARETP - Variable Cross Reference (continued)

Variable	References
QT	543, 550, 575, 700, 710, 720, 730, 740, 750, 760, 770
R$	576, 703, 705, 715, 725, 765
RF$	765, 2500
RI	700, 770
RL	576, 577, 578, 705, 715, 725, 735, 745, 755, 765
RL$	577
S%	579, 703
T9$	37000
TA#	745, 2500
TC$	577, 705, 747, 2500, 37000
TD$	405, 579, 725, 2500
TP$(	560, 2100, 2500, 2600, 2605, 2610, 37000
TS	405
UB!	578, 730
VD$	405, 579
X1(	567, 2100
YES	543, 575

3-6 $A.ARPAP

3-6-1 $A.ARPAP Variable Description

Variable	Description
AC#	Amount of last credit
AD#	Amount of last debit
AN$	Account number
CB#	Current balance
CR$	String of 128 bytes used to pass parameters to the program
CT$(	Credit terms
DC$	Date of last credit
DD$	Date of last debit
DK%	Disk drive
DT#	Discount taken
EC%	Error code
EM$(	Error messages
ER%	Error indication if non-zero
FF$	Formatted for total amount of transaction
FO$	Open credit in open Invoice File
FS$	Formatted string
I1,I2,IN	Invoice number
IA#,I2#	Invoice amount
ID%	Set to total invoice
LC	Line counter
LP	If true, output to line printer.
NF%	Number of files
NV$	String that holds the number of invoices in #A.ARAA File
NV%	The number of invoices in NV$
OI$(	Array that holds open invoices
OT#	Total number of invoices
P%	Indicates at least two old transactions are extended credit
PN$	Program name
RF$	Customer reference
RS%	Indicates that account number has been printed
SP$(	Array that holds special message
SP%	Flag indicating a special message
ST$	Invoice number
TA#	Tax amount
TC$	Transaction code
TD$	System date
TI	Total invoices
TP$(	Temporary array in Temporary File to hold transactions
TS	Tag size

3-6-1 $A.ARPAP Variable Description

TT	Total transaction
TT#	Total amount of transaction
TY	Type of transaction
VD$	System date
YP#	Year-to-date payment amount

3-6-2 $A.ARPAP - Variable Cross Reference

Variable	References
#4	610, 615, 3000, 3005
#5	610, 2000
AC#	646
AD#	646
AN$	2001, 2200, 3000
CB#	646
CC$	27015, 39000
CR$	3000
CT$(	644
DC$	646
DD$	646
DK%	610, 680
DT#	623, 628, 630, 632, 633, 634, 2001, 2205, 3000, 27015
E	634
EC%	620, 625, 628, 630, 632, 633, 634, 639, 2303, 23010, 26010, 26030, 27010, 27015, 29010, 29020
EF%	620, 2003
EM$(	410, 411, 415, 420, 2303
ER%	505, 510, 625
FF$	405, 2200, 2205, 2405
FNDI$(	644, 3000, 24800, 24900, 26040, 27030, 27800, 27900, 29030
FNID#(	39000

3-6-2 $A.ARPAP - Variable Cross Reference (continued)

Variable	References
FNSD!(	644, 24900, 27900
FO$	405, 21015, 21020, 22010, 24900, 25010, 27040, 27900
FS	405
FS$	405
I1	2405, 21030, 21725, 24900, 27040, 27050, 39000
I2	623, 2200
I2#	2405, 24800, 24900, 27020
I3	27040, 27050
IA#	21030, 21040, 24800, 26020, 26030, 26040, 27020, 27030, 27040, 27800, 29015, 29020, 29030, 39000
ID%	21020, 24800, 26040, 27030, 27800, 29030, 36000, 37000, 39000
II	2303, 2310, 2401, 2410, 21820, 21900, 37000
IN	623, 624, 632, 633, 2001, 3000, 21015, 21030, 22010, 25010, 27040, 36000
IP	21720, 21723, 21830
IT#	27040, 27800, 27900
KK	2000
LC	604, 640, 2210, 2300, 2305, 2400, 2410, 21720, 21810, 21830, 21900, 32020
LP	604, 612, 640, 642, 2300, 2400, 19915, 21720, 21810
NF%	500
NU	624, 638

Variable	References
NV$	615, 680
NV%	615, 680, 3005
OI$(	21015, 21020, 24800, 24900, 26040, 27030, 27800, 27900, 29030, 36000, 37000, 39000
OT#	623, 644, 646, 647
P%	24010, 26010, 27010, 27040, 29010, 36000
PN$	19950
Q	602, 604, 19960
Q$	602, 604, 19960
QT	602, 604
R$	604
RF$	2001, 2210, 3000
RS%	21005, 21700, 21725, 21800
SF%	21005, 21800, 21900
SP$(	412, 414, 2401
SP%	620, 642, 2401, 21050, 24800, 24900, 27030, 27800, 27900
ST$	36000
TA#	623, 628, 630, 634, 646, 2001, 2200, 3000
TC$	623, 630, 646, 647, 2001, 2200, 2205, 3000
TD$	405, 2001, 2200, 3000
TI	21015, 24900, 27900, 36000, 37000, 37005
TP$(	2000, 2001

3-6-2 $A.ARPAP - Variable Cross Reference (continued)

Variable	References
TS	405
TT	644
TT#	623, 628, 2405, 21010, 21030, 21040, 24800, 24900, 26020, 27020, 29015
TY	623, 638, 644
VD$	405, 644, 646, 3000, 24900, 27900
YP#	647

3-7 $A.ARRPG

3-7-1 $A.ARRPG Variable Description

Variable	Description
A1$	Customer address (one of two)
A2$	Customer address (two of two)
AD	Absolute date
AN$	Account number
CB#	Current balance
CD	Current date
CN$	Customer name
DA	Transaction date
ER%	Error indication if non-zero
EX	Extra days
EY	Account number
FF$	Formatted string
FS$	Flag
LC	Line counter
LP	If true, output to line printer.
MO	Transaction month
NF%	Number of files
NU	Number of companies
OA#	Invoice amount
OI$(	Array that holds open invoices
PG	Page counter
PH$	Customer phone number
T3#	Transaction amount over 30 days old
T6#	Transaction amount over 60 days old
T9#	Transaction amount over 90 days old
TB#	Total balance due
TC#	Current transaction amount
TD$	Transaction date
TI	Total invoices
TL#	Total
TS	Tag size
UD	Updated date
VD$	System date
YR	Transaction year
Z3#	Total 30-60
Z6#	Total 60-90
Z9#	Total over 90
ZC#	Total current
ZL#	Final total

3-7-2 $A.ARRPG - Variable Cross Reference

Variable	References
A%	3002, 3024
A1$	6040
A2$	6045
AD	3202, 3203, 3205
AN$	3002, 3040, 6040
CB#	6040, 6050
CD	3021, 3202
CN$	3040, 6040
DA	39000, 39010
ER%	3010, 3020, 3024, 3025, 6010, 6030
EX	3043, 3202, 3203
EY	3201, 3202, 3203
FF$	400, 3055, 3070, 3210
FNDS$(	3200
FNID#(	3200
FS	400
FS%	6025
I	98, 3045, 3200, 3201
IP	1040
LC	3024, 3035, 3040, 3048, 3058, 3060, 3075, 3135, 3215, 3300, 3310, 6029, 6050, 6070, 6130
LP	1010, 1020, 1035, 1045, 3003, 3035, 3060, 3080, 3300, 6029, 6075, 19915
MM%(	97, 98, 39010

3-7-2 $A.ARRPG - Variable Cross Reference (continued)

Variable	References
MO	39000, 39010, 39020
NF%	3005, 6005
NU	6025, 6050, 6060
OA#	3200, 3205, 3210
OI$(	3200, 3201
PG	3100, 3110, 6100, 6110
PH$	6040
PN$	3004, 6000, 19950
Q	1008, 1030, 3000, 3080, 6075
Q$	1005, 1025, 3000, 3080, 6075, 19960
QT	1008, 1030, 3000, 3080, 6075
R$	3002
RL$	1010
SC$	1035
T3#	3043, 3046, 3055, 3205
T6#	3043, 3046, 3055, 3205
T9#	3043, 3046, 3055, 3205
TB#	6025, 6050, 6064
TC#	3043, 3046, 3055, 3205
TD$	3021, 3200, 3202, 39000
TI	3030, 3045, 3048, 3203, 3210
TL#	3043, 3046, 3055, 3210
TS	400

3-7-2 $A.ARRPG - Variable Cross Reference (continued)

Variable	References
UD	3021, 3202, 39010, 39020
VD$	3021
YR	39000, 39010, 39020
Z3#	3022, 3046, 3070
Z6#	3022, 3046, 3070
Z9#	3022, 3046, 3070
ZC#	3022, 3046, 3070
ZL#	3022, 3046, 3070

3-8 $A.ARRG2

3-8-1 $A.ARRG2 Variable Description

Variable	Description
AD$	Activity date
AE$	Date of entry
AN$	Account number
D1$	System date
DA#	Discount taken
DK%	Disk drive
EX%	Extra tax
F2$	String formatted for a nine position dollar field
F3$	String formatted for invoice number
FA#	Freight amount
FA$	Freight amount
FF$	String formatted for a ten position dollar field
FS	Field size
GA#	GL adjustment
GC#	GL credits
GD#	GL discount
GF#	GL freight
GI#	GL service charge income
GP#	GL payments
GR#	GL accounts receivable
GS#	GL sales
I2$	128 byte string
IA#	Invoice amount
IA$	Invoice amount
II$	First 128 bytes of #A.ARAI File
IN	Invoice number
IN$	Invoice number
IP$	Transaction taken from Payment, Credit, and Adjustment File
IS$	First 128 bytes of the #A.ARCUD File
LC	Line counter
LD$	Last date transactions were entered in Current Activity File
LI	Number of lines printed
LI$(	Array that holds special message
LP	If true, output to line printer.
MA#	Month-to-date adjustments
MC#	Month-to-date returns/credits
MD#	Month-to-date discount
MF#	Month-to-date freight
MI#	Month-to-date service charge income

3-8-1 $A.ARRG2 Variable Description (continued)

MM$	String that holds special messages
MP#	Month-to-date payments
MR#	Month-to-date receivables
MS#	Month-to-date sales
MT#	Month-to-date tax
NV	Number of invoices in #A.ARAA File
NV$	String that holds number of invoices in #A.ARAA File
OC#	Total month-to-date credits
OD#	Total month-to-date debits
PG	Page counter
PN$	Program name
RE%	Flag used to unpack invoices
RF$	Customer reference
SC$	Clear screen codes
SR%	Flag used to unpack payment, credit or adjustment
TA#	Tax amount
TA$	Tax amount
TC#	Total GL credits
TC$	Transaction code
TD#	Total GL debits
TS	Tag size

3-8-2 $A.ARRG2 - Variable Cross Reference

Variable	References
#1	2015, 2025, 2400, 3005, 3010, 3015, 3500, 5005, 5010, 5015, 5500
#5	2500
AD$	2026, 2027, 2030, 2040, 2050, 2060, 2200, 2300, 2400, 3030, 3510, 5030, 5510
AE$	2400, 3030, 3510, 5030, 5510
AN$	2030, 2040, 2050, 2060, 2200, 2300, 2400, 3030, 3510, 5030, 5510
D1$	2005, 2027, 2085
D2$	2005, 2027, 2085
DA#	5025, 5030, 5035
DK%	2010, 2098, 2500, 3005, 4020, 5005
EX$	2030, 2040, 2060, 2400
F2$	400, 2040, 2050, 3030, 3090, 5030, 5090
F3$	400, 2030, 2040, 2050, 2060, 2200, 2300, 3030, 5030
FA#	2025, 2040, 2042, 2050, 2052, 3025, 3030, 3035
FA$	2025, 2400, 3025, 3510, 5025, 5510
FF$	400, 2030, 2040, 2050, 2060, 2088, 2089, 2090, 2091, 2092, 2094, 2200, 2300, 3030, 3090, 5030, 5090
FNDI$(	2098
FNID#(	2025, 2550, 3025, 5025
FS	400
GA#	2008, 2032, 2092, 2093, 2555, 3005, 3035, 3090, 5005, 5035, 5090

Variable	References
GC#	2008, 2062, 2091, 2093, 2555
GD#	2008, 2042, 2091, 2093, 2555, 5005, 5035, 5090
GF#	2008, 2052, 2089, 2093, 2555, 3005, 3035, 3090
GI#	2008, 2090, 2093, 2202, 2555
GP#	2008, 2042, 2090, 2093, 2555, 5005
GR#	2008, 2032, 2042, 2052, 2062, 2092, 2093, 2202, 2302, 2555
GS#	2008, 2052, 2088, 2093, 2302, 2555, 3005, 3035, 3090
GT#	2008, 2052, 2089, 2093, 2555, 3005, 3035, 3090
I	2098
I2$	2098, 2099
IA#	2025, 2030, 2032, 2040, 2042, 2050, 2052, 2060, 2062, 2200, 2202, 2300, 2302, 3025, 3030, 3035, 5025, 5030, 5035, 6002
IA$	2025, 2400, 3025, 3510, 5025, 5510
II	2115
II$	3015, 3510
IN	2025, 2030, 2040, 2050, 2060, 2200, 2300, 3025, 3030, 5025, 5030
IN$	2025, 2400, 3025, 3510, 5025, 5510
IP	1040
IP$	5015, 5510
IS$	2098, 2099, 2500, 2550

3-8-2 $A.ARRG2 - Variable Cross Reference (continued)

Variable	References
LC	2020, 2026, 2038, 2048, 2058, 2063, 2080, 2095, 2120, 2208, 2308, 3020, 3040, 3095, 5020, 5040, 5095
LD$	2005, 2026, 2027
LI	2000, 2115, 2120, 3000, 5000
LI$(	405, 2000, 2002, 2004, 2115, 3000, 3002, 5000, 5002
LP	1010, 1020, 1035, 2020, 2080, 2095, 3020, 3095, 5020, 5095
MA#	2092, 2093, 2550, 2555
MC#	2091, 2093, 2550, 2555
MD#	2091, 2093, 2550, 2555
MF#	2089, 2093, 2550, 2555
MI#	2090, 2093, 2550, 2555
MP#	2090, 2093, 2550, 2555
MR#	2092, 2093, 2550, 2555
MS#	2088, 2093, 2550, 2555
MT#	2089, 2093, 2550, 2555
NF$	3096, 4020, 5096
NV	2015, 2020, 2038, 2048, 2058, 2063, 2208, 2308, 3010, 3020, 3040, 5010, 5020, 5040
NV$	2015, 3010, 4020, 5010
OC#	2093, 2094
OD#	2093, 2094
PG	2100, 2110

3-8-2 $A.ARRG2 - Variable Cross Reference (continued)

Variable	References
PN$	2000, 3000, 4000, 5000, 19950
PP	2010, 2027, 2032, 2042, 2052, 2062, 2202, 2302
Q	1008, 1030, 2096, 4000
Q$	1005, 1025, 2096, 2097, 4000, 19960
QT	1008, 1030, 2096, 4000
RE%	3015, 3500, 3505, 3515, 5015, 5500, 5505, 5515
RF$	5030, 5510
RL$	1010
SC$	1035
SR%	3505, 3510, 5505, 5510
TA#	2025, 2050, 2052, 3025, 3030, 3035
TA$	2025, 2030, 2040, 2060, 2400, 3025, 3510
TC#	2093, 2094
TC$	2028, 2400, 3015, 5510, 6000, 6002
TD#	2093, 2094
TS	400
YES	2097, 4010

3-9 $A.ARSTG

3-9 $A.ARSTG Variable Description

Variable	Description
A1$	Customer address (one of two)
A2$	Customer address (two of two)
AN$	Account number
BF#	Balance forward
CB#	Current balance
CM$(	Array containing the type of transaction
CN$	Customer name
CT$	Credit terms
ER%	Indicates error if non-zero
FF$	Formatted string
FI%	File number
FS	Field size
HI	Used to center messages
KE$	Record key
KJ	Flag to indicate second page statements
LC	Line counter
MS$	Holds message for statements
NF%	Number of files
OI$(	Holds open invoices
PG	Page counter
PN$	Progarm name
SB#	Set to TB#
TA$	Type of account
TB#	Total balance
TI	Total invoices
TS	Tag size
TT	Total transaction
TY	Type of transaction in ASCII
TY$(	One character type of transaction code
VD$	System date
YES	Return from YES/NO Subroutine

3-9-2 $A.ARSTG - Variable Cross Reference

Variable	References
A1$	5015
A2$	5015
AN$	2015, 3005, 4005
BF#	5100, 5110, 5128, 5130, 5160, 5161
CB#	4005, 5050, 5095
CM$(	100, 3300, 5034
CN$	5015
CT$	3300, 5035
CT$(	5095, 5105, 5128, 5155, 5160
ER%	305, 315, 2020, 3005, 4005
FF$	400, 5035, 5050, 5130, 5160, 5161
FI%	3005, 4005
FNDI$(	5095
FNDS$(	5035, 5160
FNID#(	5035, 5128, 5155
FNSD!(	5095
FS	400, 10000
HI	5043, 5044
I	2010, 5003, 5010, 5015, 5020, 5135
IN	5033, 5034
JK	5105, 5128, 5130, 5150
KE$	3005, 4005
KJ	5002, 5033, 5035, 5037, 5130, 5155, 5160, 5162

3-9-2 $A.ARSTG - Variable Cross Reference (continued)

Variable	References
LC	5010, 5016, 5020, 5025, 5037, 5040, 5043, 5044, 5045, 5050, 5100, 5130, 5135, 5140, 5160, 5165
MS$	5044, 10000
NF%	305
OI$(	5033, 5035
PG	5001, 5005, 5015, 5100
PN$	19950
Q	505, 1008, 2000, 2050, 10000
Q$	500, 1005, 2000, 2050, 10000, 19960
QT	505, 1008, 2000, 2050
R$	2010, 2015, 10000
RL	2005, 2008, 2010, 10000
RL$	1010, 1050
SB#	5155, 5160
TA$	5016
TB#	5155, 5160
TI	5033, 5037
TS	400
TT	5095, 5100, 5105, 5150, 5162
TY	5155, 5160
TY$(	425, 5160
VD$	5010, 5095
YES	2055

3-10 $A.ARQUE

3-10-1 $A.ARQUE Variable Description

Variable	Description
A1$	Customer address (one of two)
A2$	Customer address (two of two)
AC#	Amount of last credit
AD#	Amount of last debit
AN$	Account number
BA#	Automatic billing amount
CB#	Current balance
CL#	Credit limit
CM$(	Array that holds credit terms
CN$	Customer name
CT$(	Credit terms
DC$	Date of last credit
DD$	Date of last debit
DR	Discount rate
ER%	Error indication if non-zero
FF$	Formatted string for the dollar amount
FI%	File number being retreived
HB#	High balance
KE$	Record key
KJ	Current transactions
LC	Line counter
LP	If true, output to lineprinter
LS%	Flag
NF%	Number of files
OI$(	Array that holds invoices
PH$	Customer phone number
PN$	Program name
TA$	Account type
TI	Total open invoices
TR	Tax rate
TS	Tag size
TT	Number of current transactions
TY	Type of transaction in ASCII
TY$	One character indicating type of transaction
V$(	Holds service charge rate in the Parameter File
YES	Return from YES/NO Subroutine
YP#	Year-to-date payments
YS#	Year-to-date sales

3-10-2 $A.ARQUE - Variable Cross Reference

Variable	References
A1$	580
A2$	582
AC#	590
AD#	605
AF%	498, 500, 510, 683
AN$	500, 510, 560
BA#	572
CB#	605
CL#	580
CM$(	430, 3300
CN$	570
CT$	700, 3300
CT$(	750, 755, 760
DC$	585
DD$	600
DR	607
ER%	410, 420, 500, 510
FF$	420, 572, 580, 582, 590, 600, 605, 700, 760
FI%	498, 500
FNDS$(	700, 750
FNID#(	700, 760
FS	420
HB#	600

3-10-2 $A.ARQUE - Variable Cross Reference (continued)

Variable	References
IJ	680
KE$	500
KJ	640, 670, 700, 750, 755, 760
LC	640, 655, 675, 680, 1020
LP	452, 454, 655, 680, 685, 1000
LS%	455
NF%	400
OI$(	700
PG	1010, 1020
PH$	585
PN$	19950
Q	450, 455, 480, 655, 688
Q$	450, 455, 470, 655, 688, 19960
QT	480, 688
R$	490, 495, 498, 510
RL$	452, 454
TA$	565, 570, 572
TI	645, 670
TR	607
TS	420
TT	650, 670
TY	755
TY$(	425, 755

3-10-2 $A.ARQUE - Variable Cross Reference (continued)

Variable	References
V$(	572
YES	690
YP#	582
YS#	590

3-11 $A.AROCR

3-11-1 $A.AROCR Variable Description

Variable	Description
A1$	Customer address (one of two)
A2$	Customer address (two of two)
AC#	Amount of last credit
AD#	Amount of last debit
AN$	Account number
BA#	Automatic billing amount
BU$	Used to retrieve company name
CO%	Used to indicate open files
CB#	Current balance
CD%	Flag set if #A.ARCUD File is open
CL#	Credit limit
CM$(	Array that holds credit terms
CN$	Customer name
CT$(	Credit terms
D#	Print buffer for input values
DC$	Date of last credit
DD$	Date of last debit
DI%	Disk
DR	Discount rate
EM$(	Array that holds error messages
ER%	Error indication if non-zero
F%	True if there is an open credit invoice
F1$(	Array where #A.ARCUD is stored
OI$	Holds invoices
PG	Page counter
PH$	Customer phone number
PN$	Program name
RT#	See Subroutine Query
ST$	Saves previous KE$ value
TA$	Type of account
TEMP$	Temporary string for #A.ARCUD, #A.ARCUO, and #A.ARCUC data
TG	Tag in account number
TI	Total invoice
TMP$	Temporary string
TR	Tax rate
TS	Tag size
TS$	Open credit invoice
TT	Total transaction
UB!	Upper bound

VD$	System date
YES	Return from YES/NO Subroutine
YP#	Year-to-date payments
YS#	Year-to-date sales
ZT	Used to read through current transactions
OI$	Holds invoices
PG	Page counter
PH$	Customer phone number
PN$	Program name
RT#	See Subroutine Query
ST$	Saves previous KE$ value
TA$	Type of account
TEMP$	Temporary string for #A.ARCUD, #A.ARCUO, and #A.ARCUC data
TG	Tag in account number
TI	Total invoice
TMP$	Temporary string
TR	Tax rate
TS	Tag size
TS$	Open credit invoice
TT	Total transaction
UB!	Upper bound
VD$	System date
YES	Return from YES/NO Subroutine
YP#	Year-to-date payments
YS#	Year-to-date sales
ZT	Used to read current transactions

3-11-2 $A.AROCR - Variable Cross Reference

Variable	References
AN$	2035, 3050, 3170
BU$	3050
CB#	3170, 3180
CM$(	115, 2500
CN$	2045, 2048, 2050, 2058, 3170
CT$	2300, 2500
CT$(	2070
D#	2620, 35000, 35005, 35010, 35015, 36005
E%	2062, 2065, 2604
EC%	2625, 35000, 35010, 35020
EM$(	110, 2625
ER%	2005, 2010, 2040, 3030, 3050
F%	2045, 2200, 2608
F3$	100, 3070, 3170
FF$	100, 2300, 2620, 35005, 36005
FNDI$(	2068, 2070, 35010
FNDS$(	2300
FNID#(	2200, 2300
FNSD!(	2070
FS	100, 2600, 2610, 2650
GB#	3040, 3070, 3180
GP#	3040, 3070, 3180
GS#	3040, 3070, 3180

3-11-2 $A.AROCR - Variable Cross Reference (continued)

Variable	References
I	2035, 2055, 2300
I2$	3040, 3050
IA#	2048, 2200, 2620, 35000, 35010, 35015, 36005
ID%	2068, 2200, 35010, 37000
II	37000
IN	2604, 2605, 2606, 2608, 36005
IP	107
KE$	3050
LB!	2600
LC	405, 2057, 2058, 2078, 2085, 3080, 3150, 3160, 3190, 36001, 36010
LP	405, 2057, 2058, 2078, 2085, 3020, 19915, 36000
N!	2604
NF%	2005, 3030
OC#	2048, 2065, 2068, 2620, 35000, 35010, 35015, 36005
OI$(	2068, 2200, 2300, 2605, 35010, 37000
PG	3100, 3110
PN$	120, 3000, 3020, 19950
Q	400, 405, 2020, 2055, 2080, 2600, 3010, 19960
Q$	400, 405, 2020, 2055, 2080, 2600, 3010, 19960
QT	400, 405, 2020, 2055, 2080, 2600, 2610, 2650, 3010

3-11-2 $A.AROCR - Variable Cross Reference (continued)

Variable	References
R$	405, 2035
RI	2600, 2650
RL	2025, 2030, 2035, 2604, 35000
RT#	2060, 2070, 35010, 35015
SC$	2050
TI	2045, 2048, 2055, 2065, 2200, 37000, 37005
TS	100
TS$	2045, 2068, 2200, 2608
TT	2070
UB!	2600
VD$	2070
YES	2085
YP#	3170, 3180
YS#	3170, 3180

3-12 $A.AREOD

3-12-1 $A.AREOD Variable Description

Variable	Description
AD$	Activity date
AE$	Date of entry
AN$	Account number
BE$	Bell on terminal
DK%	Disk drive
EX%	Extra tax
FA#	Freight amount
FA$	Freight amount
GA#	GL adjustment
GC#	GL credits
GD#	GL discount
GF#	GL freight
GI#	GL service charge income
GP#	GL payments
GR#	GL accounts receivable
GS#	GL sales
I2$	128 byte string
IA#	Invoice amount
II$	128 bytes of #A.ARAI Invoice Register File
IN	Invoice number
IN$	Holds invoice number
IP$	128 bytes of #A.ARAP File
IS$	128 bytes of #A.ARAA File
MA#	Month-to-date adjustments
MC#	Month-to-date returns/credits
MD#	Month-to-date discount
MF#	Month-to-date freight
MI#	Month-to-date service charge income
MP#	Month-to-date payments
MR#	Month-to-date receivables
MS#	Month-to-date sales
MT#	Month-to-date tax
NP	Number of payments (numeric representation)
NP$	Number of payments (string representation)
NS	Number of sales
NS$	Number of sales
NV	Number of invoices in #A.ARAA File
NV$	Number of invoices in #A.ARAA File (string representation)
PN$	Program name

3-12-1 $A.AREOD Variable Description (continued)

RE%	Position in sales transactions
SC$	Clear screen codes
SR%	Sales or payment transaction record position
TA#	Tax amount
TA$	Tax amount
TC$	Transaction code
TS	Tag size
TS$	Type of transaction

3-12-2 $A.AREOD - Variable Cross Reference

Variable	References
#1	1110, 2017, 2025, 3030, 3035, 3040, 3044
#2	3032, 3035, 3305, 3310
#3	3032, 3035, 3400, 3410
#5	2500
AD$	2017
AE$	2017
AN$	2017
DK%	1110, 2500, 3030, 3044
EX$	2017
FA#	2025, 2042, 2052
FA$	2017, 2025
FNDI$(	2565, 2600, 2610, 2620, 2630, 2640
FNID#(	2025, 2550, 2570, 2575, 2580, 2585, 2590
FS	100
GA#	2008, 2032, 2555, 2585, 2630
GC#	2008, 2062, 2555, 2585, 2630
GD#	2008, 2042, 2555, 2580, 2620
GF#	2008, 2052, 2555, 2570, 2600
GI#	2008, 2202, 2555, 2575, 2610
GP#	2008, 2042, 2555, 2580, 2620
GR#	2008, 2032, 2042, 2052, 2062, 2202, 2302, 2555, 2590, 2640
GS#	2008, 2052, 2302, 2555, 2570, 2600

3-12-2 $A.AREOD - Variable Cross Reference (continued)

Variable	References
GT#	2008, 2052, 2555, 2575, 2610
I2$	100, 2500, 2565, 2600, 2610, 2620, 2630, 2640, 2700, 3300, 3305, 3310, 3400, 3405, 3410
IA#	2025, 2032, 2042, 2052, 2062, 2202, 2302
IA$	2017, 2025
II$	3035, 3300, 3305, 3310
IN	2025
IN$	2017, 2025
IP$	3035, 3400, 3405, 3410
IS$	2500, 2550, 2570, 2575, 2580, 2585, 2590, 2700, 3035, 3040, 3300, 3400
MA#	2550, 2555, 2565
MC#	2550, 2555, 2565
MD#	2550, 2555, 2565
MF#	2550, 2555, 2565
MI#	2550, 2555, 2565
MP#	2550, 2555, 2565
MR#	2550, 2555, 2565
MS#	2550, 2555, 2565
MT#	2550, 2555, 2565
NP	3032, 3400, 3410
NP$	3032
NS	3032, 3300, 3310

3-12-2 $A.AREOD - Variable Cross Reference (continued)

Variable	References
NS$	3032
NV	1110, 1120, 2020, 2038, 2048, 2058, 2062, 2208, 2308, 3030, 3038, 3042
NV$	1110, 3030, 3044
PN$	19950
Q$	19960
RE%	3300, 3305, 3400, 3405
SC$	1100
SR%	3300, 3400
TA#	2025, 2052
TA$	2017, 2025
TC$	2017, 2028
TS	100
TS$	100, 3040

3-13 $A.AREOM

3-13-1 $A.AREOM Variable Description

Variable	Description
AD#	Amount of last debit
AN$	Account number
BA#	Automatic billing amount
CB#	Current balance
CR$	String to hold the first 128 bytes of #A.ARAA File
CT$(	Array to hold transactions
DA	Day of the current transaction
DD$	Date of the last debit
ER%	Error indication if non-zero
F%	Flag for service charge invoice located in file
FI%	Number of file
FS	Field size
HB#	High balance
IA#	Amount of service charge invoice
ID%	Position of service charge invoice in file
JK	Used to read transactions
KE$	Record key
KK	Set to total transactions remaining in "moving window"
M1	Month of latest transaction in the Transaction File
MM%	Data
MO	Month of the current transaction
NF%	Number of files
NV$	Holds number of invoices in the #A.ARAA File
NV%	Set to the value of NV$
NY	Age in days of the oldest transaction
OI$(	Array that holds invoices
PN$	Program name
SC$	Clear screen codes
SI#	New service charge amount
SD	Discount amount
TA$	Type of account
TD$	Transaction date
TI	Number of invoices for this account
TS	Tag size
TS$	Packed string for invoice numbers 99997 to 99999
TT	Total transactions
UD	Used to calculate CY (number of days since transaction date)
V$(	Holds Parameter File entries
VD$	System date

3-13-1 $A.AREOM Variable Description (continued)

YR	Year of the latest transaction
YS#	Year-to-date sales

3-13-2 $A.AREOM - Variable Cross Reference

Variable	References
#5	4015
AD#	4728, 4815
AN$	4028, 4730, 4820
BA#	4800, 4810, 4815, 4820
CB#	4728, 4815
CR$	4015, 4730, 4820
CT$(	100, 110, 4610, 4655, 4722, 4742, 4744, 4800
DA	39000, 39010
DD	100, 110
DD$	4728, 4815
DK%	4015
DY	4775, 4780
ER%	4020, 4025, 4028
F%	4724, 4805, 4900
FI%	4028
FNDI$(	4722, 4726, 4730, 4800, 4810, 4820, 4950, 4960
FNDS$(	100, 110, 4744, 4745
FNID#(	4750, 4900
FNMO(	110, 4600, 4605, 4670, 4675
FNSD!(	4722, 4726, 4800, 4810, 4950, 4960
FNYO(	100, 4600, 4605, 4670, 4675
FS	4010

3-13-2 $A.AREOM - Variable Cross Reference (continued)

Variable	References
GD	4760, 4765, 4770
HB#	4815
I	98, 4750, 4755, 4760, 4765
IA#	4726, 4750, 4780, 4810, 4900, 4955, 4965
ID	4745, 4770, 4775
ID%	4726, 4742, 4744, 4810, 4900, 4955, 4965
JK	4610, 4655, 4675, 4745, 4750, 4795
KE$	4028, 4029
KJ	4605, 4606, 4610, 4675, 4676
KK	4610, 4615
M	4605, 4606, 4675, 4676
M1	4600, 4606, 4670, 4676
MM%(	97, 98, 39010
MO	39000, 39010, 39020
NF%	4020
NV$	4015, 4120
NV%	4015, 4120, 4732, 4828
OI$(	4726, 4745, 4750, 4810, 4900, 4950, 4960
PN$	19950
Q	19960
Q$	19960
SC$	4029

3-13-2 $A.AREOM - Variable Cross Reference (continued)

Variable	References
SC%	4743, 4744, 4770
SD	4744, 4775
SI#	4720, 4722, 4726, 4728, 4730, 4740, 4780
TA$	4030
TD	4740, 4770, 4775
TD$	4740, 4744, 4745, 39000
TI	4700, 4745, 4900, 4950, 4955, 4960, 4965
TS	4010
TS$	4724, 4730, 4805, 4820, 4900, 4950, 4960
TT	4600, 4605, 4610, 4615, 4650, 4655, 4670, 4722, 4742, 4800
UD	4740, 4744, 4745, 39010, 39020
V$(	4780
VD$	4722, 4726, 4728, 4730, 4740, 4800, 4810, 4815, 4820, 4950, 4960
YR	39000, 39010, 39020
YS#	4815

3-14 $A.ARGLI

3-14 $A.ARGLI Variable Desciption

Variable	Description
CR%	Create Flag
DK%	Disk drive
F1$	Account number
F2$	Source code
F3$	Reference
F5$	Title of this transaction
F6$	Packed date the transaction was processed
F7$	Transaction credit or debit amount
FS	Field size
GA$(	Holds current or new account number
GC$(	Array describing GL accounts
PN$	Program name
SC$	Clear screen code
T$	First 128 bytes of #A.ARGLT File
TF$	Holds #A.ARGLT File
TX$	Description of account
VD$	System date
Yes	Return from YES/NO Subroutine
Z6$	Holds account descriptors
Z7$	Holds account descriptors
Z8$	Holds account descriptors

3-14-2 $A.ARGLI - Variable Cross Reference

Variable	References
#2	2020, 2030, 2037, 40120
CR%	532, 1005, 2035, 40085
DK%	2000, 35000, 40090
F1$	2020, 2030, 36000, 40120
F2$	2030, 36000
F3$	36000
F5$	2030, 36000
F6$	2020, 36000
F7$	2035, 36000
FNDI$(	2035
FNSD!(	2020
FS	500, 1005, 1025
GA$(	500, 1000, 1005, 1020, 2030, 40120
GC$(	500, 1000, 2030, 40060
GL$	2020, 35010, 36000, 40090
I	570, 1000, 1005, 1020, 2030, 2037, 40060, 40120
IG$	510, 2020, 35010, 40090
PN$	19950
Q	520, 531, 1000, 19960
Q$	520, 531, 1000, 19960
QT	575, 1005
R$	532, 533, 1010, 1015, 1020
RI	1000, 1025

3-14-2 $A.ARGLI - Variable Cross Reference (continued)

Variable	References
RL	1005, 1010
SC$	535
T$	2010, 35010
TF$	510, 35000, 40090
TS	500
TX$	500, 2030
VD$	2020
YES	530
Z6$	560, 40000
Z7$	560, 40010
Z8$	560, 40020

3-15 $A.ARGLT

3-15-1 $A.ARGLT Variable Description

Variable	Description
DK%	Disk drive
F1$	Account number
F2$	Source code
F3$	Reference
F5$	Title of the transaction
F6$	Packed date the transaction was processed
F7$	Transaction credit or debit amount
GT#(	Array to hold fields in #A.ARGLT File
I2$	First 128 bytes of #A.ARCUD File
PN$	Program name
TF$	Name of GLT File
V$(	Holds customer data in Parameter File
VD$	System date

3-15-2 $A.ARGLT - Variable Cross Reference

Variable	References
#1	4120, 4125, 5010
#2	4105, 4110, 4115, 4130
DK%	4105, 4108, 4120
F1$	4105
F2$	4105
F3$	4105
F5$	4105, 4110
F6$	4105, 4110, 4130
F7$	4105, 4115, 4130
FNDI$(	4130, 5000
FNID#(	4115, 4125, 4127
FNSD!(	4110, 4130
FS	4000
GL$	4105, 4108
GT#(	4105, 4110, 4115, 4125, 4127, 4130
I	4110, 4115, 4125, 4127, 4130, 5000
I2$	4990, 5000, 5010
IG$	4006, 4108
IS$	4120, 4125, 4127, 4990, 5010
PN$	19950
Q$	19960
TF$	4006, 4105, 4108
TS	4000

3-15-2 $A.ARGLT - Variable Cross Reference (continued)

Variable	References
V$(	4103
VD$	4110, 4130

3-16 $A.ARSYS

3-16-1 $A.ARSYS Variable Description

Variable	Description
D%	Disk drive number
FC%	Set to true
FS	Field size
IC$(	Array to hold the type of Parameter File entries
IL(	Array to hold the length of the Parameter File entries
IT$(	Array to hold the name of Parameter File entries
LB!	Lower bound
N!	Drive number
N$	Holds " for the System File
R$	See Query Subroutine
RI	See Query Subroutine
RL$	Used to hold query
TE	Number of elements
UB!	Upper bound
VV$(	Array to hold the System Parameter File entries
W	Width of CRT print
WIDTH	Width
YES	Return from the YES/NO Subroutine

3-16-2 $A.ARSYS - Variable Cross Reference

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, 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
RI	5700, 5799
RL$	2010
TE	4010, 4020, 5010, 5020, 5030, 5040, 5980, 5985, 5986, 5990

3-16-2 $A.ARSYS - Variable Cross Reference (continued)

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

3-17 $A.ARLNK

3-17-1 $A.ARLNK Variable Description

Variable	Description
D%	Disk drive number
FC%	Set to true
FS	Field size
IC$(	Array to hold the type of Parameter File entries
IL(	Array to hold the length of Parameter File entries
IM	Holds 1 for string representation
IP	Holds 0 for string representation
IT$(	Array to hold the name of Parameter File entries
LB!	Lower bound
N!	Drive number
R$	See Query Subroutine
RI	See Query Subroutine
RL$	Used to hold query
TE	Number of elements
UB!	Upper bound
VV$(	Array to hold the System Parameter File entries
W	Width of CRT print
WIDTH	Width
YES	Return from the YES/NO Subroutine

3-17-2 $A.ARLNK - 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

3-17-2 $A.ARLNK - 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

3-18 $A.ARCRE

3-18-1 $A.ARCRE Variable Description

Variable	Description
BU$	Used to retrieve company name
D%	Used to store the drive number
DA$	Creation date
DI%	Disk drive number
FI%	File number
FS	Field size
I2$	128 byte string
LB!	Lower bound
N!	Number returned from the query routine
NA$	File name
NAM$	ISAM data file names
NB%	Number of buffer
NF%	Number of files
NV$	String to hold the number of invoices in #A.ARAA Data File
UB!	Upper bound
VD$	System date
YES	Return from the YES/NO subroutine

3-18-2 $A.ARCRE - Variable Cross Reference

Variable	References
#5	6060, 6070, 6080, 6085
BU$	6090, 6110
D%	1110, 1140, 1160, 6015, 6020, 6060, 6070, 6080, 6085
DA$	6020
DI%	6020
FI%	6028
FNDI$(	6105, 6108
FS	100
I	6100, 6105, 6107, 6108
I2$	6090, 6105, 6108, 6110
LB!	1110
N!	1110
NA$	6090
NAM$	6030, 6040, 6050
NB%	6025
NF%	6025
NV$	6060, 6070, 6080, 6085
PN$	19900
Q	1100, 1120, 1150
Q$	1100, 1120, 1150, 6016
QT	1100, 1120, 1150
UB!	1110
VD$	6020

3-18-2 $A.ARCRE - Variable Cross Reference (continued)

Variable	References
YES	1130, 1150, 6017

3-19 AR COMMON ROUTINES 46000-49999

3-19-1 AR Common Routines 46000-49999 Variable Description

Variable	Definition
A1$	Customer address (one of two)
A2$	Customer address (two of two)
AC#	Amount of last credit
AD#	Amount of last debit
AN	Value of account number
AN$	Account number
BA#	Automatic billing amount
CB#	Current balance
CC%	Flag, set if #A.ARCUC File is used
CD%	Flag, set if #A.ARCUD File is used
CL#	Credit limit
CN$	Customer name
CO%	Flag to indicate open file
CT$	Credit terms
CT$(	Credit terms
DC$	Date of last credit
DD$	Date of last debit
DI%	Disk unit where files are located
DK%	Disk drive
DR	Discount rate
ER%	Error indication if non-zero
F1$(	Array to store all #A.ARCUD data
F2$(	Array to store all #A.ARCUO data
F3$(	Array to store all #A.ARCUC data
FI%	File number
HB#	High balance
KE$	Record key
NA$	File name
NB%	Number of buffers
NF%	Number of files
OI$	Invoices
PH$	Customer phone number
TA$	Type of account
TEMP$	Temporary string to hold Master File data
TG	Tag
TI	Total invoices
TMP$	Temporary string
TR	Tax rate

3-19-1 AR Common Routines 46000-49999 Variable Description (continued)

TS	Tag size
TT	Total transactions
YP#	Year-to-date payments
YS#	Year-to-date sales
ZT	Used to read transactions

3-19-2 AR46000 - Variable Cross Reference

Variable	References
#1	48130, 48135, 48140, 48145, 48150
#2	48230, 48245
#3	48330, 48345
A1$	46005
A2$	46005
AC#	46030
AD#	46030
AN	46010
AN$	46000, 46100, 46105, 46130, 46200, 46205, 47500, 47610, 47675, 47700, 47705, 47710, 47800, 47810
BA#	46040
BU$	47540
CB#	46030
CC%	48320, 49020
CD%	48120, 49000
CL#	46020
CN$	46005
CO%	48220, 49010
CT$	46005, 46210
CT$(	46210, 47722, 48320
DC$	46012, 46014, 46016, 46025
DD$	46025
DI%	48100, 48200, 48300

3-19-2 AR46000 - Variable Cross Reference (continued)

Variable	References
DK%	48100, 48200, 48300
DR	46020
ER%	46000, 46003, 46105, 46130, 46205, 47500, 47615, 47620, 47675, 47705, 47710, 47750, 47810, 48110, 48210, 48310
F1$(	46005, 46010, 46012, 46020, 46025, 46030, 46035, 46040, 47545, 48120, 48130, 48135, 48140, 48145, 48150
F2$(	46115, 46130, 46135, 47635, 47645, 47660, 47675, 48220, 48230, 48245
F3$(	46210, 47705, 47722, 48320, 48330, 48345
FI%	46000, 46100, 46200, 47500, 47700, 48100, 48200, 48300, 49000, 49010, 49020
FILE%	47600
FNDI$(	47545
FNDS$(	46025
FNID#(	46020, 46030, 46035, 46040
HB#	46035
I	46125, 46135, 46140, 48240, 48245, 48340, 48345
I2$	47540
IT	47600, 47605, 47630, 47635
K$	46020
KE$	46000, 46100, 46105, 46130, 46200, 46205, 47500, 47645, 47660, 47672, 47674, 47700, 47705, 47710, 47722, 47800, 47810
KEY$	47610
KM	46115, 46130, 46135

3-19-2 AR46000 - Variable Cross Reference (continued)

Variable	References
NA$	48100, 48200, 48300
NB%	48000
NF%	48000
NI	46115, 46130, 46135, 47625, 47635, 47640, 47645, 47660
OI$	46120
OI$(	46120, 46135, 47635, 48220
PH$	46012, 46013, 46016
Q	46016, 46017
Q$	46012, 46015, 46016
ST$	47672, 47674
TA$	46005
TEMP$	48135, 48140, 48145, 48150, 48245, 48345
TG	46115, 47600, 47610, 47700, 47705, 47710
TI	46100, 46115, 46120, 46125, 46135, 47605, 47630, 47670
TMP$	48245, 48345
TR	46020
TS	46115, 47600, 47700
TT	46200, 46210, 47705, 47722
YP#	46035, 47545
YS#	46035, 47545
ZT	47705, 47722

3-20 COMMON ROUTINE 50000-59999

3-20-1 Common Routine 50000-59999 Variable Description

Variable	Description
BE$	Terminal bell (not used on the PCC 2000)
CH	Input character
D!	Valid date
DA	Input day
DG	Flag for numeric input check
DK%	Disk drive where program is located
DP	Flag for decimal point input
E$	String containing "END"
ER%	Error indication if non-zero
FS	Field size
HB$	Used to print Help Message
HF%	Help File number
HJ	Number of records
HK	Temporary variable for binary search
HL	Used to determine how to break help message into sentences
HN$(	Fielded variables for help number
HN(	Array for help number
HP	Index used in the binary search for HN
HS(	Starting record number
HS$(	Fielded variable for HS(
IM	Case IM of menu 1: return to main menu 2: return to report generation menu 3: return to utility menu
IP	Number of program to be run
LB!	Lower bound
LC	Line counter
LP	If true, output to lineprinter
MO	Input month
N!	Value returned from numeric input routine
N#	Used for round off in the pack string function
N$	Input value for SYS File
N1$-N5$	Holds program and data file name
P$	Variable holds input string
PN$	Program printout heading string
Q	Query prompt message number
Q$	Query prompt message string
QT	Query tab space count
R$	String input after the prompt

3-20-1 Common Routine 50000-59999 Variable Description (continued)

RI	Input specifying linefeed
RL	Length of string input
RL$	Holds significant characters in R$
S$	Eight byte strings
SC$	Screen clear codes
T$	HS, HP converted to a string
UB!	Upper bound
V$(	Array to hold the system elements
VC$	System company name
VD$	System date
VO$	Key value
VS$	System name
VT$	Disk type
W	Number of columns
YES	Return from YES/NO Subroutine
YR	Input year

3-20-2 50000 - Variable Cross Reference

Variable	References
#1	50002, 50004, 50020
#HF%	59120, 59210, 59230, 59240
BE$	50000, 50200, 50300
BELL$	54000, 54100, 54200, 54300, 54530
CH	51240, 51250, 51260, 51270, 51660, 51670, 51680, 51690
D!	50175
D#	50160, 51655, 51710
DA	51400, 51424, 51426, 51430, 51440
DG	51200, 51250, 51280, 51600, 51670, 51700
DK%	50002, 50004
DP	51200, 51260, 51600, 51680
E$	51200
ER%	54050, 54100
FNDI$(	50160
FNDS$(	50175
FNID#(	50165
FNSD!(	50170
FS	51010
HB$	59120, 59210
HF%	59200
HJ	59000, 59080, 59090, 59110, 59120, 59240, 59250
HK	59000, 59080, 59100, 59120, 59150, 59230, 59240, 59250

Variable	References
HL	59130, 59140
HN$	59250
HN$(	59200, 59230, 59250
HN(	59090, 59100, 59200, 59250
HP	59080, 59090, 59100, 59110, 59240, 59250
HS	59110, 59120
HS$	59250
HS$(	59200, 59230, 59250
HS(	59000, 59110, 59200, 59250
I	50020, 54530
I$	50165
II	51030
IM	50002
IP	50002
JJ	51240, 51270, 51280, 51640, 51660, 51690, 51700
LB!	51290
LC	50920
LP	50900
MO	51400, 51422, 51430, 51440
N!	51200, 51290
N#	50160, 50165
N$	50004, 50020
N1$	50000

Variable	References
N2$	50004
N3$	50210
N4$	50310
N5$	59200
P$	50002, 55000, 55040, 55100, 55120
P1	55000, 55008, 55010, 55040, 55100, 55110, 55120
P1$	55000, 55005, 55008, 55010, 55020, 55100, 55110
P2	55010, 55020, 55040, 55110
P2$	55000, 55030, 55040, 55100, 55110, 55120
P3	55020, 55110
P3$	55005
P4	55020, 55030
P5	55020, 55030
PN$	50910
Q	51070, 59080, 59090, 59100
Q$	51000, 51800
QT	51000
R$	51010, 51015, 51020, 51030, 51200, 51220, 51230, 51240, 51290, 51400, 51420, 51422, 51424, 51426, 51430, 51620, 51640, 51650, 51655, 51660, 51710
RI	51010
RL	51015, 51030
RL$	51015, 51020, 51426, 51805, 51810

Variable	References
S$	50170
SC$	50055, 50900, 52000
STRING$(	55008, 55040, 55120
T$	59110, 59120, 59130, 59140, 59230
UB!	51290
V$(	50020, 50050
VC$	50050, 50905
VD$	50002, 50910
VO$	52010
VS$	50050, 50905
VT$	50050
W	50050, 50905, 50910
WIDTH	50050
YES	51805
YR	51400, 51430, 51440

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.