



---

**ACCOUNTS RECEIVABLE  
VERSION 1  
REFERENCE MANUAL**

---

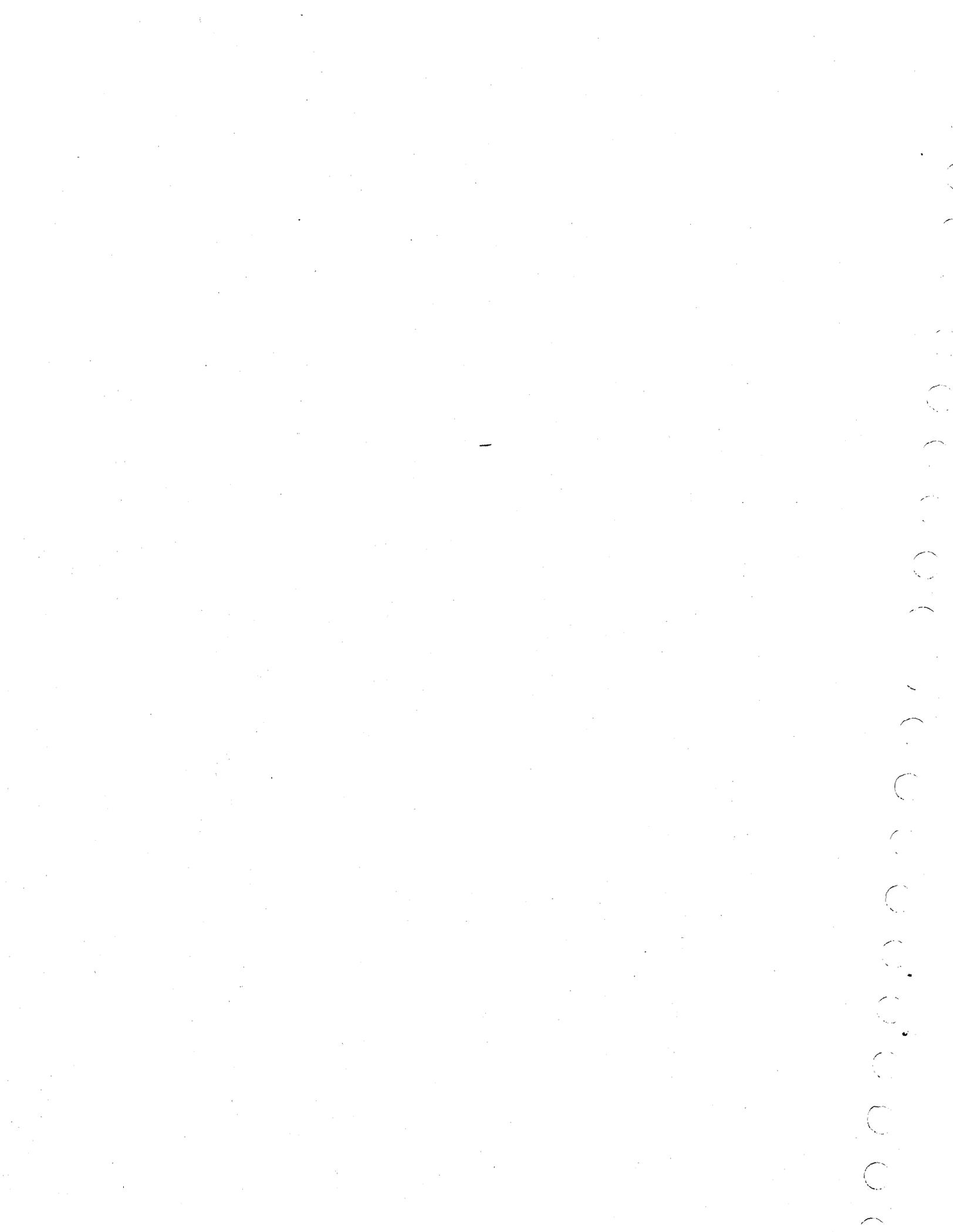
**CDC<sup>®</sup> OPERATING SYSTEM:  
INTERACTIVE TERMINAL-ORIENTED SYSTEM 1**



# LIST OF EFFECTIVE PAGES

New features, as well as changes, deletions, and additions to information in this manual, are indicated by bars in the margins or by a dot near the page number if the entire page is affected. A bar by the page number indicates pagination rather than content has changed.

PAGE	REV	PAGE	REV	PAGE	REV	PAGE	REV	PAGE	REV
Cover	—								
Title page	—								
ii	A								
iii/iv	A								
v/vi	A								
vii	A								
viii	A								
1-1	A								
2-1 thru 2-41	A								
3-1	A								
3-2	A								
4-1 thru 4-16	A								
A-1	A								
A-2	A								
Index-1	A								
Index-2	A								
Comment sheet	A								
Cover	—								



# PREFACE

The four major divisions of this manual are intended for readers with four different areas of interest. The Introduction is intended for the reader who wants a general description of the accounts receivable application module, its capabilities, requirements, and the services provided. The User Information section contains instructions and guidance for the person who must work with the system to perform day-to-day processing. The External Reference section is intended for the reader who is looking for a definition of the system; that is, a specification of what the module does, and, indirectly, an account of what the module does not do. The Internal Reference section contains information on the internal design of Accounts Receivable 1 and is the most technical section. This section is intended for the reader who needs information about the organization

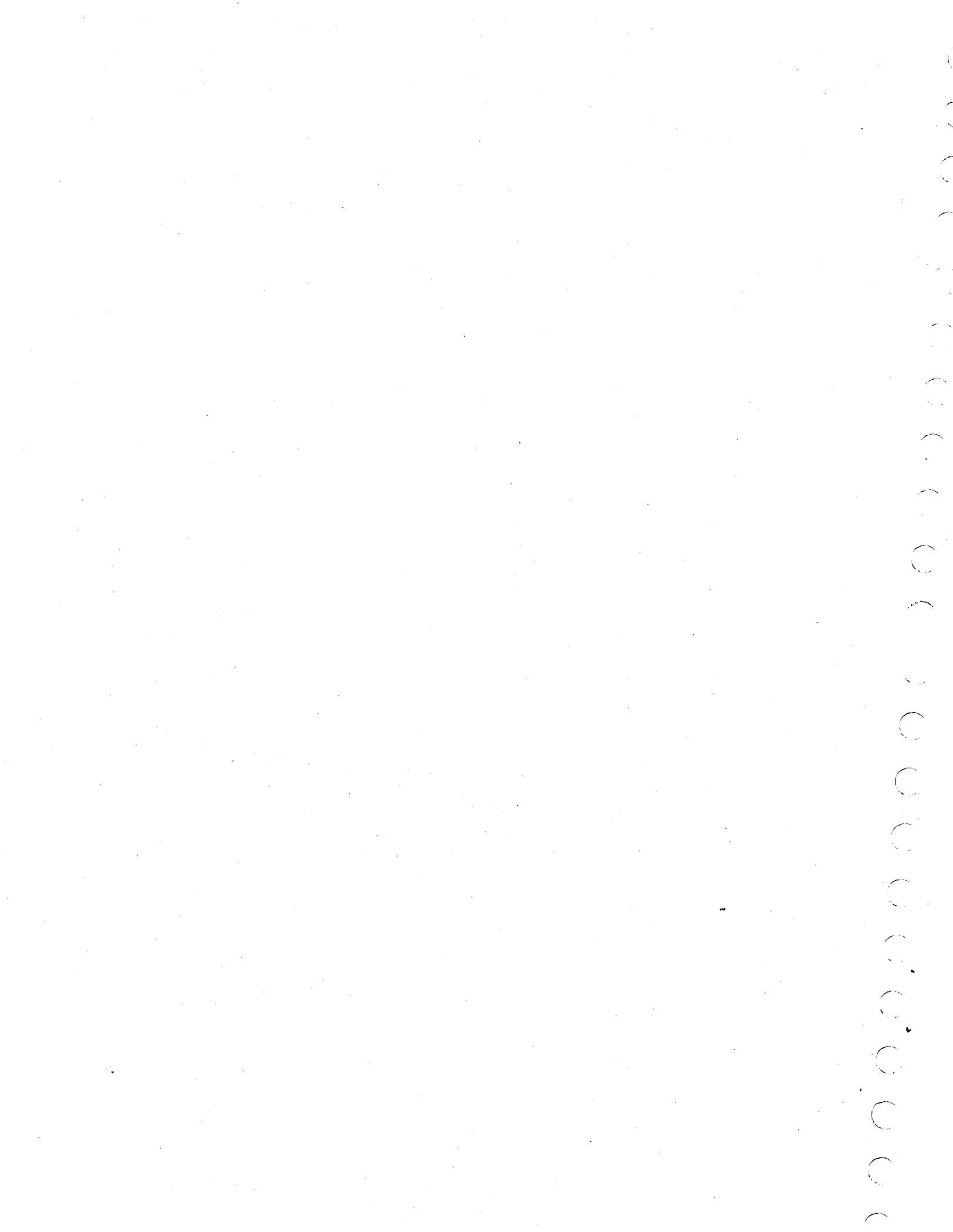
and the implementation of this application module on the CYBER 18 computer.

For detailed information on the other modules in the manufacturing and distribution system, the reader should refer to the reference manual for the application module in which he is interested. The Order Entry/Invoicing 1 Reference Manual, publication number 96769160, describes a module with which Accounts Receivable 1 interfaces and may be of interest to the reader.

The reader may also wish to refer to the following documents on the Interactive Terminal-Oriented System (ITOS), under which Accounts Receivable 1 runs:

<u>Publication</u>	<u>Publication Number</u>
Interactive Terminal-Oriented System (ITOS) Reference Manual	96768290
Interactive Terminal-Oriented System (ITOS) User's Guide	96768250

This product is intended for use only as described in this document. Control Data Corporation cannot be held responsible for the proper functioning of undescribed features or undefined parameters.



# CONTENTS

<b>1. INTRODUCTION</b>	1-1		
Module Organization	1-1	Inquiry	3-1
Environment	1-1	Data Capture From Other Modules	3-1
		Statements and Commands	3-1
		Job Control Language	3-2
		Procedure Control Entries	3-2
		Reports	3-2
<b>2. USER INFORMATION</b>	2-1	Other Services and Facilities	3-2
Procedure Flow and Schedule	2-1	Statements	3-2
Daily	2-1		
Monthly	2-1		
Yearly	2-3		
On Request	2-3		
Operating Instructions	2-4	<b>4. INTERNAL REFERENCE</b>	4-1
System Initiation	2-4	Module Organization and Structure	4-1
Menu and Procedure Selection	2-6	Program Narratives	4-1
Procedure ARNEW	2-6	AR005 Accounts Receivable Master	
Procedure ARCOR	2-6	File Update	4-1
Procedure ARMFUPD	2-6	AR007 Remove Flagged Records	
Using Operating Instruction Tables	2-6	From ARMAST	4-1
Run Sheets	2-22	AR010 Reads ARTRANS File and Creates	
Report Descriptions	2-35	An Indexed File ARIND1	4-1
Customer List	2-35	AR021 CRT Transaction Input	4-1
Invoice Register	2-35	AR022 Correct Transaction On Cards	4-1
Cash Receipts Journal	2-35	AR025 Card Transaction Input	4-3
Accounts Receivable Summary	2-35	AR100 Reads SARINPT	4-3
Detailed Accounts Receivable Aging		AR110 Reads SARINPT	4-3
Report	2-36	AR120 Reads SARINPT	4-3
Summary Accounts Receivable Aging		AR130 Master File List	4-4
Report	2-36	AR140 Produce ARZERO	4-4
Year End Sales Data Removal Report	2-36	AR106 Remove Paid Invoices	4-4
Month End Summaries	2-36	AR200 Detailed Aging	4-4
Accounts Receivable Transaction Edit		AR220 Summary Aging	4-4
Listing	2-36	AR240 Statements	4-4
Statements	2-36	AR250 Year-End Updates	4-4
		File/Program Cross Reference	4-4
		File Descriptions	4-4
<b>3. EXTERNAL REFERENCE</b>	3-1		
Data Entry and Information Control	3-1		

## APPENDIX

A Glossary		A-1	
------------	--	-----	--

## INDEX

### FIGURES

1-1 Accounts Receivable		2-5 Autoload Display Screen	2-5
2-1 Daily Procedural Flow	2-1	2-6 Starting ITOS Display Screen	2-5
2-2 Monthly Procedural Flow	2-2	2-7 ITOS Log-on Display Screen	2-5
2-3 Yearly Procedural Flow	2-3	2-8 ITOS Log-off Display Screen	2-5
2-4 On Request Procedural Flow	2-4	2-9 Exit from ITOS Display Screen	2-6

2-10	Menu for Accounts Receivables	2-6	2-23	Cash Receipts Journal	2-36
2-11	Batch Header Display Screen	2-7	2-24	Accounts Receivable Summary Report	2-36
2-12	Invoice Display Screen	2-7	2-25	Detailed Accounts Receivable Aging Report	2-37
2-13	Credit Memo Display Screen	2-7	2-26	Summary Accounts Receivable Aging Report	2-38
2-14	Debit Memo Display Screen	2-8	2-27	Year End Sales Data Removal Report	2-39
2-15	Cash Display Screen	2-8	2-28	Month End Summary Reports	2-40
2-16	Adjustment Display Screen	2-8	2-29	Accounts Receivable Transaction Edit Listing	2-40
2-17	ARCOR Display Screen	2-10	2-30	Statement	2-41
2-18	Control Display Screen	2-10	4-1	Accounts Receivable Overview	4-2
2-19	Customer Information Display Screen	2-10			
2-20	Deletion Display Screen	2-10			
2-21	Customer Master File Listing	2-35			
2-22	Invoice Registers	2-35			

## TABLES

2-1	Inventory Transaction Table	2-9
-----	-----------------------------	-----

Accounts Receivable 1 is a module in the manufacturing and distribution system that enables the user to maintain, in on-line disk files, the information needed to keep track of the receivable history of each of the user's customers. This module prints statements for each of the user's customers that has amounts outstanding and produces a variety of reports to keep the user informed of the status and activity of his customers. In addition, Accounts Receivable 1 provides current up-to-date information by enabling the user to make inquiries and display information on his CRT terminal. Thus, this module provides both a processing function that produces bills and statements and a management information function that provides the information needed by management, sales personnel, service representatives, and administrative/clerical personnel to stay informed of the customer's changing needs, requirements, and status.

Accounts Receivable provides the user with a number of different types of services:

- Data is entered through the terminal, for example, to add new records to the accounts receivable master file, to update information in that file, and to enter transactions that update information in the accounts receivable master file.
- The module edits and checks the information entered through the terminal and prints a report enabling the user to make corrections to the information he has entered.
- The module prints a variety of reports that give the user visibility to the information stored in the accounts receivable files.
- The module prints statements on all open items.

## MODULE ORGANIZATION

The execution flow of the accounts receivable module is shown in figure 1-1, which also illustrates the information flow within the module and between this module and the other application modules in the manufacturing and distribution system. On-line disk files provide the means of communication between programs within the application module, while the CRT terminal and reports are used for communication between the system and its users. Transaction files, which are picked up and processed against system files by other application modules, are the means of communication between this module and other modules.

## ENVIRONMENT

The procedures within Accounts Receivable are executed as job streams by ITOS, the Interactive Terminal-Oriented

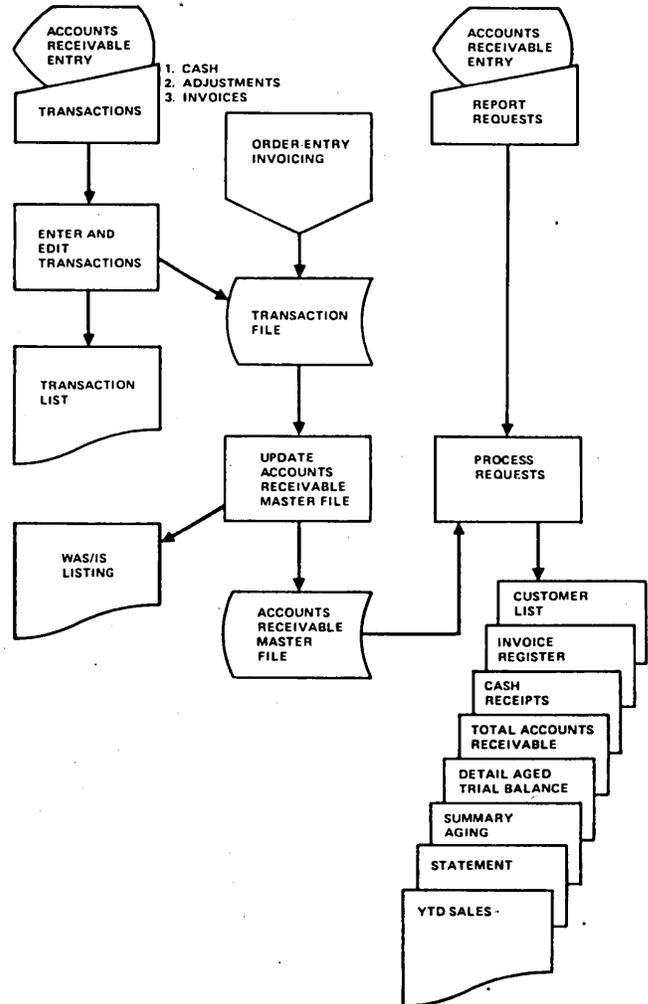
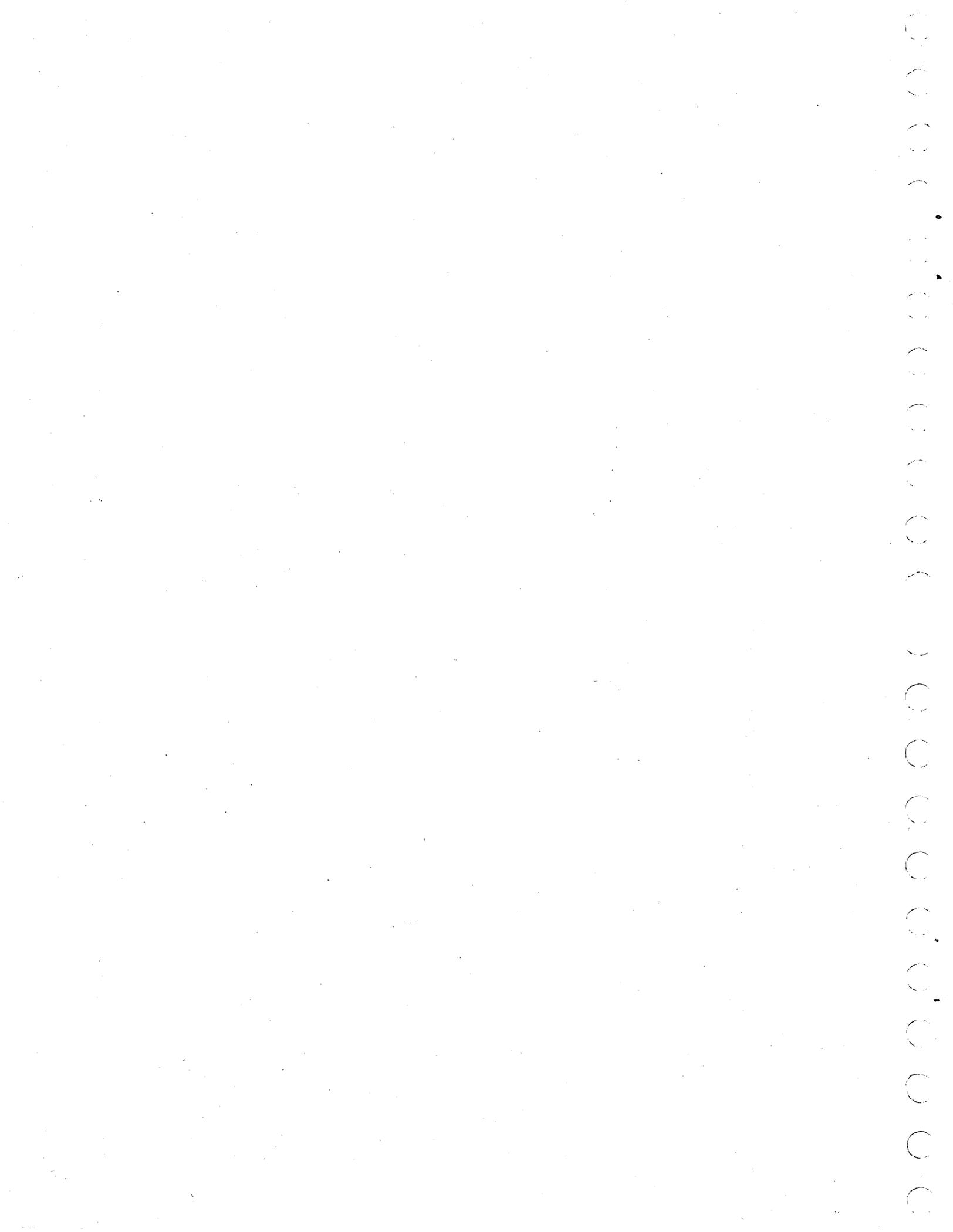


Figure 1-1. Accounts Receivable

System. ITOS processes the requests to execute each procedure and controls the order of execution of the programs within a given procedure. In addition, it provides the environment for the execution of each program. Thus, such facilities as the allocation of resources, file management, and interface with the CRT terminals are provided by ITOS.



This section provides detailed, step-by-step instructions on how to use the Accounts Receivable module and the procedures within that module. The reader should already be familiar with the accounts receivable application area. This section also contains instructions on how to perform each of the daily, monthly, and yearly tasks, how to enter data into the system, how to update information within the system, how to request reports, and how to make inquiries to obtain information from the system.

## PROCEDURE FLOW AND SCHEDULE

This section describes the execution flow and the schedule for Accounts Receivable. The Accounts Receivable procedures are performed at four different intervals:

- Daily
- Monthly
- Yearly
- On request

The operator should use this schedule to determine when each of the various procedures within the accounts receivable module is to be run. Some procedures and the results they produce are optional or may be run less or more often, depending upon individual needs.

### DAILY

The flow of the Accounts Receivable procedures performed on a daily basis is shown in figure 2-1. The customer master file (ARMAST) is updated with changes, additions, and deletions through the CRT, using procedure ARMFUPD. This procedure also provides the ability to display on the CRT the current file contents for any customer. If desired, the customer master file can be purged with procedure ARGPURG. This copies/reorganizes the file, dropping all records with the delete code set.

Invoices, credit memos, debit memos, cash receipts, and adjustments (all referred to as transactions) are entered daily through the CRT. Key items of data are validated against the master files. All transactions are posted to a transaction file for audit trail purposes. All transactions are entered into the system with procedure ARNEW. At any time during the day, an edit list (audit trail) of all

transactions entered today can be created with procedure AREDLST. The listing is by batch number and has computer-generated batch totals matched against manual batch totals for a balance check.

### NOTE

If the order entry module is included in the system, transactions are created and passed from Order Entry to Accounts Receivable. These transactions also appear on the edit list.

Corrections to transactions are entered through procedure ARCOR. Corrections are reflected on subsequent runs of AREDLST.

When all daily activity is complete for Accounts Receivable (and Order Entry, if included in the system) AREDLST must be run to generate a complete file of accounts receivable input (ARINPT) for the day. This also creates the final and complete audit trail (edit list). Procedure ARUPD is run to add today's transactions to file ARTRANS and to print the cash receipts journal and invoice register. Procedure ARUPD also initializes the system for tomorrow's transaction entry.

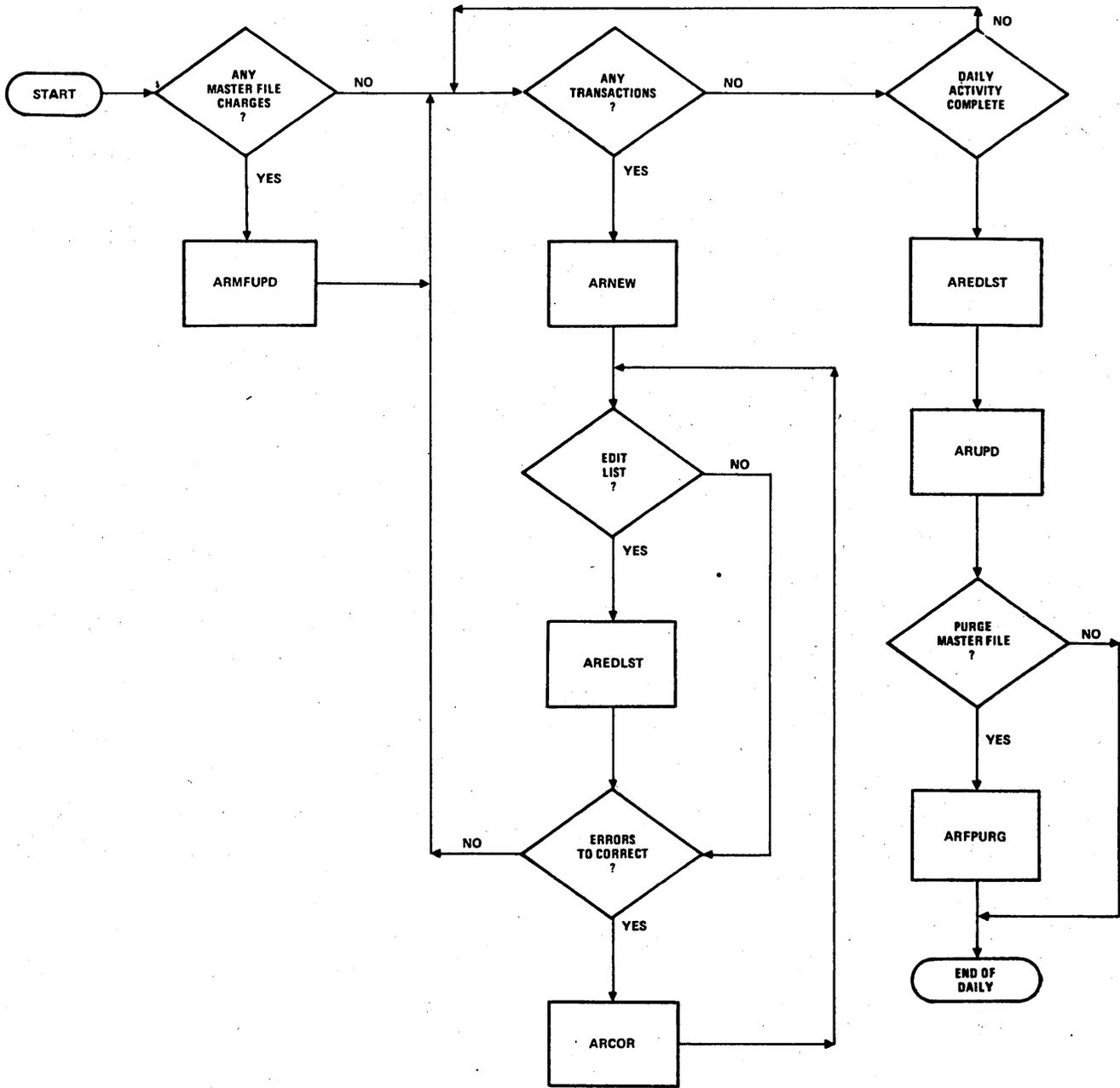
### MONTHLY

Figure 2-2 illustrates the flow of the monthly Accounts Receivable procedures. At the end of the month, procedure AR200 is run to print the detail aged trial balance. This report shows each invoice broken down into 30-, 60-, and 90-day aging categories.

Procedure AR220 produces the summary aged trial balance, which summarizes the aged receivable information by customer.

Procedure AR240 produces statements, including all open items.

To close accounts receivables for the month, run procedure ARMND. This removes all paid (zero balance) invoices from the ARTRANS file and updates the customer master file average pay days and total number invoices for each customer. Control totals are printed.

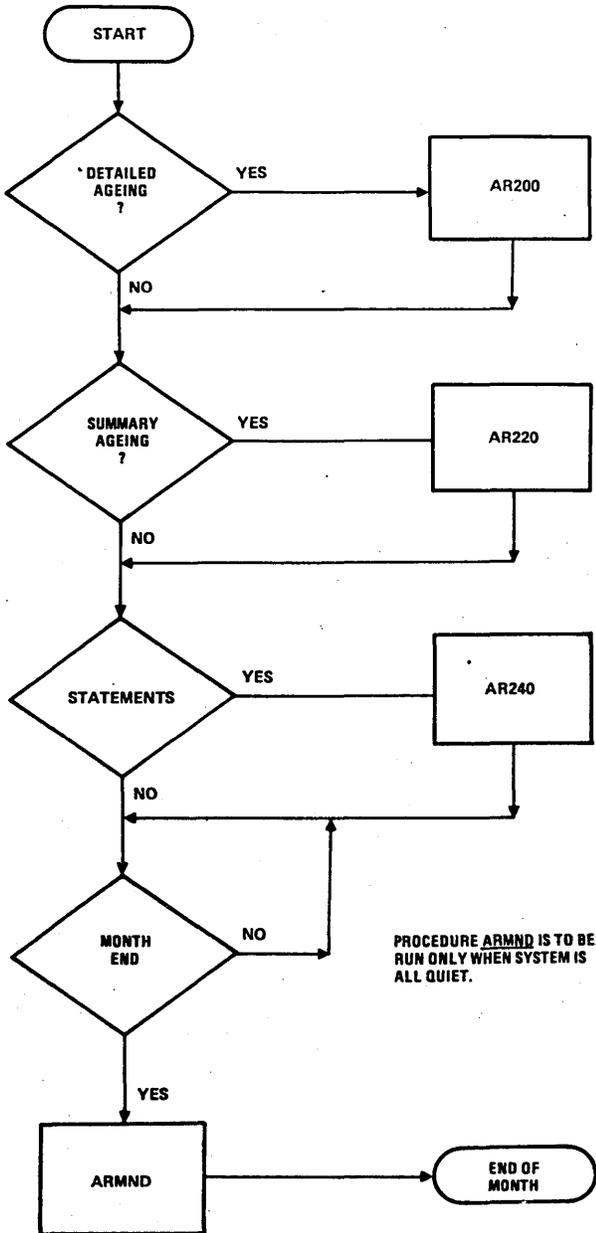


NOTE: THE FOLLOWING PROCEDURES ARE TO BE RUN ONLY FROM THE SYSTEM CONSOLE:  
 ARFPURG (WHEN SYSTEM IS ALL QUIET)  
 AREDLST  
 ARUPD (WHEN SYSTEM IS ALL QUIET)

0000

Figure 2-1. Daily Procedural Flow

THESE PROCEDURES TO BE RUN ONLY FROM SYSTEM CONSOLE



0607

Figure 2-2. Monthly Procedural Flow

YEARLY

Annual Accounts Receivable procedures are shown in figure 2-3. After the final month-end closing for the year, procedure ARYND is run. This zeroes out the year-to-date sales for all customers in the master file and produces the year-to-date sales report, by customer.

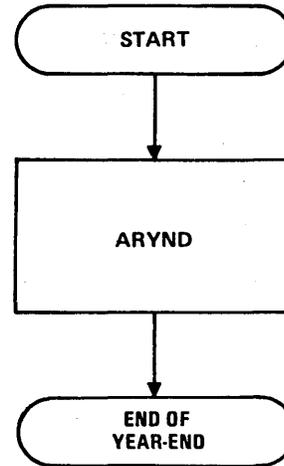
ON REQUEST

Some procedures produce reports from system files without updating or in any way affecting the files. These procedures may be run at any time (see figure 2-4).

Procedure AR130 lists the customer master file.

Procedure AR200 produces the detail aged trial balance.

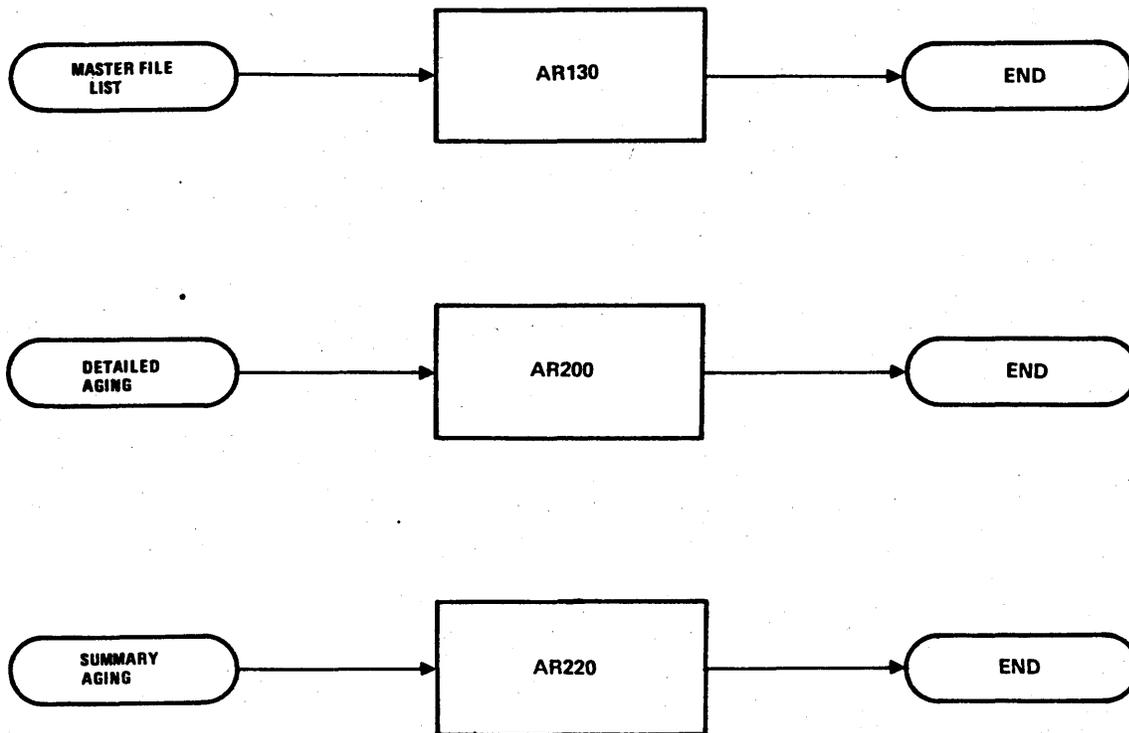
Procedure AR220 produces the summary aged trial balance.



TO BE RUN ONLY FROM SYSTEM CONSOLE WHEN SYSTEM IS ALL QUIET

0606

Figure 2-3. Yearly Procedural Flow



0805

Figure 2-4. On Request Procedural Flow

## OPERATING INSTRUCTIONS

The tables provided in this section give the detailed instructions needed to enter data into the system, update or change data already in the system, and perform whatever other tasks a given procedure enables the operator to do. The tables are intended to be used as detailed, step-by-step instruction sheets by an operator learning to use the system and as refresher and reference sheets for an operator already experienced with the system.

Each procedure used in the conversational mode is described below by:

- An introduction to the procedure giving a brief description of the procedure, what it does, what information is needed when it is used, etc.
- Samples of the screens displayed by the procedure
- The operating instructions table giving step-by-step instructions on what should be done to accomplish the required task

## SYSTEM INITIATION

These operating instructions tell how to:

- Autoload the operating system (figure 2-5 shows the screen displayed).
- Start ITOS (figure 2-6 shows the screen displayed).
- Log on with ITOS (figure 2-7 shows the screen displayed).
- Log off from ITOS (figure 2-8 shows the screen displayed).
- Stop ITOS (figure 2-9 shows the screen displayed).

Of the above operations, logging on and off may be done from any terminal; the other operations may be done only from the system console.

```
MSOS 5.0 -- PSR LEVEL XXX MM/DD/YY
SET PROGRAM PROTECT
J28@

LS K MODE
ENTER DATE/TIME MMDDYYHHMM
>
0825770830
DATE: 25 AUG 77 TIME: 0830:00
```

Figure 2-5. Autoload Display Screen

```
MI
>
START
BUILDING SYSTEM FILES
ITOS ACTIVE AT HHMM
```

Figure 2-6. Starting ITOS Display Screen

```
CDC CYBER-18 ITOS SYSTEM - VER 1.0
'SYSTEM NAME'
TERMINAL = 1
PASSWORD =
USER ID =
REQUEST =
```

Figure 2-7. ITOS Log-on Display Screen

```
REQUEST=EX
ITOS OFF AT HHMM
```

Figure 2-8. ITOS Log-off Display Screen

```

MI
>
STOP
VERIFY
OK
UNTIL HHMM

```

Figure 2-9. Exit from ITOS Display Screen

## MENU AND PROCEDURE SELECTION

This set of operating instructions tells how to display the menu for Accounts Receivable 1 and how to initiate the procedures in this module. Figure 2-10 shows the menu for this module.

### PROCEDURE ARNEW

Procedure ARNEW is used during daily processing to enter the following types of transactions into the system:

- IN Invoices
- CM Credit memos
- DM Debit memos
- CA Cash receipts
- AJ Cash adjustments

Figures 2-11 through 2-16 show the screens that are displayed by this procedure. Table 2-1 shows the valid transaction codes that can be entered through this procedure.

```

A C C O U N T S   R E C E I V A B L E
A - CUSTOMER FILE MAINTENANCE
B - CUSTOMER FILE LISTING
C - CUSTOMER FILE PURGE
D - TRANSACTION ENTRY
E - TRANSACTION EDIT LISTING
F - TRANSACTION CORRECTIONS
G - CASH RECEIPTS / INVOICE REGISTER
H - DETAILED AGEING
I - SUMMARY AGEING
J - PRINT STATEMENTS
K - MONTH-END ACTIVITY
L - YEAR-END ACTIVITY
Z - EXIT

```

Figure 2-10. Menu for Accounts Receivables

### PROCEDURE ARCOR

Procedure ARCOR is used to make corrections to transactions that have been entered into the system. Transactions that are in error are flagged in the transaction edit listing. This same listing should be checked to find the relative record number that enables the procedure to locate the transaction to be corrected. Figure 2-17 shows the screen that is displayed by this procedure.

### PROCEDURE ARMFUPD

Procedure ARMFUPD enables the user to perform the following operations:

- Add a new customer to the accounts receivable master file
- Delete a customer from the accounts receivable master file
- Update information on a customer already in the master file
- Display information for a customer in the master file

Information is referenced and located by the customer using the customer number, a unique number for each of the user's customers assigned by the user.

Figures 2-18 through 2-20 show the screens displayed by this procedure.

## USING OPERATING INSTRUCTION TABLES

To use these instructions, the operator should first select the table for the procedure to be executed. With the needed data and information, proceed through the instructions sequentially, step-by-step, repeating instructions or groups of instructions as needed. For each step, the operator should note the prompt or message that appears on the screen to ensure that he is at the correct step. Then he should enter the appropriate operator response as specified in the instruction, keeping within the requirements given for maximum length, data type, and special entry columns.

```
CARD21 A/R TRANSACTION EDIT.
```

```
START OF NEW BATCH.  
TRANS CODE- >  
BARC NO.- >  
TRANSACTION TOTAL- >  
DISCOUNT TOTAL- >
```

Figure 2-11. Batch Header Display Screen

```
* INV * CUSTOMER# >  
INVOICE- >  
GROSS AMT- >  
TAX- >  
FRT- >  
NET- >  
  
DATE- > TAX CODE- >  
OD?- >
```

```
* DOCUMENT ADDED *
```

Figure 2-12. Invoice Display Screen

```
* CM * CUSTOMER# >  
DOC NO.- >  
GROSS AMT- >  
TAX- >  
FRT- >  
NET- >  
  
DATE- > TAX CODE- >  
OK?- >
```

```
* DOCUMENT ADDED *
```

Figure 2-13. Credit Memo Display Screen

The instruction may also specify possible system responses. The operator should compare these with the system response that actually occurs on the screen to ensure that the desired result has been obtained. The Next-Step column tells which instruction step should be used next.

The following general instructions apply when using any of the procedures on the CRT to update files in the Accounts Receivable module.

- After each entry, press CARRIAGE RETURN.
- To change any field that has been entered on the screen (for example, when an error has been detected before the display on the screen is displayed), use the RUBOUT key. This key has the following effects:
  - If one or more characters have been entered into a field, the cursor is repositioned to the beginning of the field.

```

* DM *  CUSTOMER# >
        DOC NO.- >
        GROSS AMT- >
        TAX- >
        FRT- >
        NET- >

        DATE- >          TAX. CODE- >
        OK?- >

* DOCUMENT ADDED *

```

Figure 2-14. Debit Memo Display Screen

```

* CASH *  INV#- >
          AMT DUE-      CASH-      DISC-
          OK?- >

          CHECK#- >
          ABA#- >      OK?-

* CASH APPLIED *

```

Figure 2-15. Cash Display Screen

```

* AJ *  CUSTOMER- >
        DOC NO.- >
        AMOUNT- >
        OK?- >

* DOCUMENT ADDED *

```

Figure 2-16. Adjustment Display Screen

-If no character has been entered into the field, the cursor is repositioned to the beginning of the previous field.

- To skip an item of information (that is, leave the field the way it was), press LINE FEED.
- To skip the remaining fields on the screen (leaving them the way they were on entry to the screen), enter an sign as the first character of any field.
- Although some information items have decimal positions, the decimal point should not be entered when

the item is keyed in. The operating instructions specify the number of assumed decimal positions in each numeric field. If the Data Type column contains an N, the field is numeric. The number immediately following N is the number of positions to the right of the decimal point. (If there is no number after the N, the number of decimal positions is assumed to be zero.) Each decimal position to the right of the implied decimal point must be keyed in, although leading zeros to the left of the number may be omitted.

The following pages contain the operating instruction tables.

TABLE 2-1. INVENTORY TRANSACTION TABLE

Transaction Number	Description	Transaction Type	Reference Number	Transaction Quantity Equals:	Effect of Transaction Quantity On:						Comments
					Stock-On-Hand	Stock-On-Order	Allocation	Month-To-Date Usage	Average Usage	Year-To-Date Usage	
10	New sales order	NEW SO	SO#	Order quantity	N/A	N/A	+	N/A	N/A	N/A	
12	Delete sales order	DELETE SO	SO#	Quantity ordered minus quantity shipped	N/A	N/A	-	N/A	N/A	N/A	
14	Invoice	INVOICE	INV#	Quantity shipped	-	N/A	-	+	N/A	N/A	
16	Credit memo	CR MEMO	INV#	(Quantity shipped)	(-)	N/A	N/A	(+)	N/A	N/A	
18	Manual invoice	MANUAL INV	INV#	Quantity shipped	-	N/A	N/A	+	N/A	N/A	
20	Direct bill	DRECT BILL	INV#	Quantity shipped	-	N/A	N/A	+	N/A	N/A	
40	New purchase order	NEW PO	PO#	Quantity ordered	N/A	+	N/A	N/A	N/A	N/A	
42	Adjust purchase order quantity ordered	RPL PO QTY	PO#	New quantity ordered minus old quantity ordered	N/A	+	N/A	N/A	N/A	N/A	
43	Adjust purchase order quantity received	RPL PO REC	PO#	New quantity received minus old quantity received	+	-	N/A	N/A	N/A	N/A	
44	Purchase order receipt	PO RECEIPT	PO#	Quantity received	+	-	N/A	N/A	N/A	N/A	
45	Cancel purchase order quantity or delete purchase order	DELETE PO	PO#	Quantity ordered minus quantity received	N/A	-	N/A	N/A	N/A	N/A	
60	Open jobs	OPEN WO	WO#	Job quantity	N/A	+	N/A	N/A	N/A	N/A	Parent
61	Open jobs (components)	WO COMPT	WO#	Quantity required	N/A	N/A	+	N/A	N/A	N/A	Components
62	Release jobs	RLSE WO	WO#	Quantity issued	-	N/A	-	+	N/A	N/A	Components
63	Material issues	MTLISSUE	WO#	Quantity issued	-	N/A	N/A	+	N/A	N/A	Components
64	Change job quantity	CHG WO QTY	WO#	New quantity minus old quantity	N/A	+	N/A	N/A	N/A	N/A	Parent
65	Change job quantity (components)	MAT JOB QTY	WO#	New quantity required minus old quantity required	N/A	N/A	+	N/A	N/A	N/A	Components
66	Delete open jobs	DLT OPN WO	WO#	Job quantity	N/A	-	N/A	N/A	N/A	N/A	Parent
67	Delete open jobs (components)	DEC RS DLT	WO#	Quantity required	N/A	N/A	-	N/A	N/A	N/A	Components
68	Close job short	CL WO SHRT	WO#	Job quantity minus quantity complete	N/A	-	N/A	N/A	N/A	N/A	Parent
70	Adjust requisitions	ADJ STK RQ	WO#	Manual	-	N/A	N/A	+	N/A	N/A	Components
72	Completed production 1	COMPRO #1	WO#	Quantity completed	+	-	N/A	N/A	N/A	N/A	Parent
73	Completed production 2	COMPRO #2	WO#	Minimum of job quantity and quantity completed	N/A	-	N/A	N/A	N/A	N/A	Parent
80	Adjust allocation	ADJ ALLOC	N/A	Manual	N/A	N/A	+	N/A	N/A	N/A	
82	Adjust stock-on-order	ADJUST SOO	N/A	Manual	N/A	+	N/A	N/A	N/A	N/A	
86	Adjust stock-on-hand	ADJUST SOH	N/A	Manual	+	N/A	N/A	N/A	N/A	N/A	
88	Replace stock-on-hand	REPLCE SOH	N/A	Manual	RPLC	N/A	N/A	N/A	N/A	N/A	
90	Adjust average usage	ADJ AVGUSE	N/A	Manual	N/A	N/A	N/A	N/A	+	N/A	
93	Adjust month-to-date usage	ADJ MTDUSE	N/A	Manual	N/A	N/A	N/A	+	N/A	N/A	
95	Adjust year-to-date usage	ADJ YTDUSE	N/A	Manual	N/A	N/A	N/A	N/A	N/A	+	

Receive

```

KEY >
TRANS-IN
  CUST#:>      INVOICE #:      GROSS:>
  FREIGHTJ:>
  TAX AMT:>
  TAX CODE:>
  NET:>

```

Figure 2-17. ARCOR Display Screen

```

CUSTOMER NUMBER- [   ]
SECTION {1,2,E}- [   ]

```

Figure 2-18. Control Display Screen

```

CUSTOMER NAME- [           ] CUST # XXXXXX
ADDRESS LINE 1- [           ]
ADDRESS LINE 2- [           ]
CITY- [           ]
STATE- [   ]
ZIP- [   ]
PHONE- [           ]
CREDIT LIMIT {#}- [   ]
STATEMENT ? - [   ]
YTD NET SALES {#}- [   ]
CONTACT PERSON- [           ]
DATE LAST PAYMENT- [   ]
AVG-DAYS-TO-PAY- [   ]
# OF INV'S PAID- [   ]
CURRENT A/R BALANCE- [   ]

```

Figure 2-19. Customer Information Display Screen

```

*** 'D' TO DELETE- [   ] CUST# XXXXXX

```

Figure 2-20. Deletion Display Screen

OPERATING INSTRUCTIONS			PROCEDURE NAME System Initiation		PROGRAM NAME		SHEET <u>1</u> OF <u>2</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP	
<b>TO AUTOLOAD</b>								
1		Ready the system disk pack (SYSVOL) on drive 0. Push STOP, MASTER CLEAR, and RUN in that order on the CYBER 18 control panel.				Loads the operating system into main memory and initiates execution	2	
2	MSOS 5.0 -- PSR LEVEL xxx mm/dd/yy SET PROGRAM PROTECT	Enter ESC J28					3	
3	ENTER DATE/TIME MMDDYYHHMM	Enter the date and time	10	N		Displays date and time	--	
<b>TO START ITOS FROM THE SYSTEM CONSOLE</b>								
1		Enter manual interrupt (CONTROL G)					2	
2	MI	Enter: START	5	A		Builds system files and initiates ITOS. Displays ITOS ACTIVE AT nn	--	
		START,X	7	AN		Initiates ITOS, but bypasses building system files. Displays ITOS ACTIVE AT nn	--	
<b>TO LOG ON UNDER ITOS FROM ANY TERMINAL</b>								
1		Enter + CARRIAGE RETURN					2	
2	PASSWORD =	Enter password if password is enabled				Password entry is not echoed on the terminal screen except at the system console	3	
3	USER ID =	Enter: CARRIAGE RETURN - To log on as a common user				ITOS indicates that it is ready to accept requests by displaying:	4	
4	REQUEST =	User ID - To log on with a user ID					--	
<b>TO LOG OFF FROM ITOS</b>								
1	REQUEST =	Enter EX	2	A		ITOS OFF LINE AT hh:mm:ss	--	

OPERATING INSTRUCTIONS		PROCEDURE NAME System Initiation	PROGRAM NAME			SHEET <u>2</u> OF <u>2</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
TO EXIT FROM ITOS AT THE SYSTEM CONSOLE							
1		Enter manual interrupt (CONTROL G)					2
2	MI	Enter STOP	4	A			3
3	VERIFY	Enter OK	2	A			4
4	UNTIL HHMM	Enter:  Expected restart time (a value between 0000 and 2400)	4	N		Displays at every active terminal: ITOS OFF-LINE AT hhmm UNTIL hhmm	--
		CARRIAGE RETURN					
<b>LEGEND:</b> MAX LTH - Maximum length Data type - A    Alphabetic AN   Alphanumeric Nx   Numeric with x decimal positions							

OPERATING INSTRUCTIONS		PROCEDURE NAME Menu and Procedure Selection	PROGRAM NAME			SHEET <u>1</u> OF <u>1</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
1	REQUEST =	Enter the code for this module: AR	2	A		Displays the menu for this module	2
		Enter the procedure name	8	AN		Initiates the procedure	3
2	SELECTION	Select the letter code for the procedure desired	1	A		Initiates the procedure	3
3		Refer to the operating instructions for the chosen procedure					--
<p><b>LEGEND:</b></p> <p>MAX LTH - Maximum length  Data type - A      Alphabetic                AN     Alphanumeric</p>							

OPERATING INSTRUCTIONS		PROCEDURE NAME ARCOR	PROGRAM NAME AR022			SHEET <u>1</u> OF <u>2</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
1	KEY-	Enter the key of the trans- action to be corrected. This number may be ob- tained from the trans- action edit listing.	5	N			2
		Enter E	1	A		Ends the job	--
2		Change information as required:  IN - Invoice DM - Debit memo CM - Credit memo AJ - Adjustment CA - Cash					4 12 10 12 15
3	TRANS-IN CUST #:	Enter correct customer number or line feed to next step	6	AN			4
4	INVOICE #:	Enter correct invoice number or line feed to next step	7	N0			5
5	GROSS:	Enter correct gross amount or line feed to next step	9	N2			6
6	FREIGHT:	Enter correct freight or line feed to next step	7	N2			7
7	TAX AMT:	Enter correct tax amount or line feed to next step	7	N2			8
8	TAX CODE:	Enter correct tax code or line feed to next step	1	AN			9
9	NET:	Enter correct net or line feed to next step	9	N2			1
10	TRANS-CM CUST #:	Enter correct customer number or line feed to next step	6	AN			4
11	TRANS-DM CUST #:	Enter correct customer number or line feed to next step	6	AN			4
12	TRANS-AJ CUST #:	Enter correct customer number or line feed to next step	6	AN			13
13	INVOICE:	Enter correct customer number or line feed to next step	7	N0			14

OPERATING INSTRUCTIONS		PROCEDURE NAME ARCOR	PROGRAM NAME AR022			SHEET <u>2</u> OF <u>2</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
14	AJ AMOUNT	Enter correct amount or line feed to next step	9	N2			1
15	TRANS-CA CUST #:	Enter correct customer number or line feed to next step	6	AN			16
16	INVOICE #:	Enter correct invoice number or line feed to next step	7	AN			17
17	CASH:	Enter correct cash amount or line feed to next step	9	N2			18
18	DISCOUNT:	Enter correct discount amount or line feed to next step	9	N2			1
<b>LEGEND:</b> MAX LTH - Maximum length Data type - A Alphabetic AN Alphanumeric Nx Numeric with x decimal positions							

OPERATING INSTRUCTIONS		PROCEDURE NAME ARMFUPD	PROGRAM NAME AR005			SHEET <u>1</u> OF <u>2</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
1		Select operation --  Add a new customer  Change information for a customer already in the file  Delete a customer  Display information on an existing customer  End the job					2  6  10 14  16
TO ADD A NEW CUSTOMER TO THE FILE							
2	CUSTOMER NUMBER- [ ]	Enter the new customer number	6	AN		Displays information (screen 1) for an existing customer  Displays NEW RECORD	3  4
3		Check the number. Press rubout, then enter another new customer number.					2
4	SECTION (1, 2, E)- [ ]	Enter section - 1	1	N			5
5	CUSTOMER NAME- [ ] ADDRESS LINE1- [ ] ADDRESS LINE2- [ ] CITY- [ ] STATE- [ ] ZIP- [ ] PHONE- [ ] CREDIT LIMIT (\$) - [ ] STATEMENTS?- [ ] YTDNET SALES (\$) - [ ] CONTACT PERSON- [ ] DATE LAST PAYMENT- AVG-DAYS-TO-PAY- [ ] # OF INV'S PAID- [ ]	Enter customer name address  city state zip code phone number credit limit statement code year-to-date net sales person to contact date of last payment average days to pay number of invoices paid	24 24 24 12 2 5 10 6 1 7 16 6 3 5	AN AN AN A A N N NO AN NO AN N NO NO			2
TO CHANGE INFORMATION FOR A CUSTOMER ALREADY ON THE FILE							
6	CUSTOMER NUMBER- [ ]	Enter customer number of the customer to be changed	6	AN		Displays NEW RECORD  Displays information for customer to be changed	7  8
7		Press rubout, then enter correct customer number					6a
8	SECTION (1, 2, E)- [ ]	Enter section - 1	1	AN		Displays section 1	9

OPERATING INSTRUCTIONS		PROCEDURE NAME	PROGRAM NAME			SHEET <u>2</u> OF <u>2</u>	
		ARMFUPD	AR005				
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
9	CUSTOMER NAME- [ ] ADDRESS LINE1- [ ] . . OF INV'S PAID- [ ]	Press line feed for each field to be left as is. Enter date for each field to be changed.					2
TO DELETE A CUSTOMER FROM THE MASTER FILE							
10	CUSTOMER NUMBER- [ ]	Enter the number of the customer to be deleted				Displays NEW RECORD or displays information for a customer you do not wish to delete	11
						Displays information for the customer to be deleted	12
11		Press rubout, then enter the correct customer number					10
12	SECTION (1, 2, E)- [ ]	Enter section - 2	1	N			13
13	*** 'D' TO DELETE- [ ] CUST XXXXXX	Enter D if this is the customer to be deleted	1	A		This customer is flagged for deletion	2
TO DISPLAY INFORMATION ALREADY ON FILE FOR A CUSTOMER							
14	CUSTOMER NUMBER- [ ] SECTION (1, 2, E)- [ ]	Enter the number of the customer to be displayed				Displays NEW RECORD or displays information for a customer not wanted	15
						Displays information desired	2
15		Press rubsout, then enter the correct customer number					14
TO END THE JOB							
16	CUSTOMER NUMBER- [ ] SECTION (1, 2, E)- [ ]	Enter any customer number, then CR , then (section) E					--
<b>LEGEND:</b> MAX LTH - Maximum length Data type - A   Alphabetic AN   Alphanumeric Nx   Numeric with x decimal positions							

OPERATING INSTRUCTIONS		PROCEDURE NAME ARNEW	PROGRAM NAME AR021			SHEET 1 OF 4	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
1	START OF NEW BATCH TRANS CODE	Enter transaction code for this batch. See table 2-1.	2	A			2
2	BATCH NO.	Enter a unique batch number chosen by the operator. Must be greater than 99	3	N			3
3	TRANSACTION TOTAL	Enter the total gross amount of the batch	10	N2			4
4	DISCOUNT TOTAL	Enter the total discount amount of the batch	10	N2		Goes to next step depend- ing on the transaction code entered in step 1:  <u>Code</u>  IN - Invoice 7 CA - Cash 35 CM - Credit memo 14 DM - Debit memo 23 AJ - Adjustment 32	
TRANSACTION TYPE -- IN -- INVOICE							
5	CUSTOMER #	Enter customer number  Enter E (Exit)  Press RUBOUT	6  1	N  A		Ends the program  Displays batch total screen	6  --  42
6	INVOICE	Enter invoice number	7	N			7
7	GROSS AMT	Enter gross accounts receivable amount	9	N2			8
8	TAX	Enter tax amount	7	N2			10
9	FRT	Enter freight amount	7	N2			10
10	NET	Enter net amount	9	N2			11
11	DATE	Enter transaction date (mmddy)	6	N			12

OPERATING INSTRUCTIONS		PROCEDURE NAME	PROGRAM NAME		SHEET		
		ARNEW	AR021		2 OF 4		
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
12	TAX CODE	Enter tax code	1	AN			13
13	OK ?	Enter: Y - Yes N - No R - Retry	1	AN			5 7 5
TRANSACTION TYPE -- CM -- CREDIT MEMO							
14	CUSTOMER #	Enter customer number Press RUBOUT	6	N		Displays batch total screen	15 42
15	DOC NO.	Enter credit memo number	7	N			16
16	GROSS AMT	Enter gross accounts receivable amount	9	N2			17
17	TAX	Enter tax amount	7	N2			18
18	FRT	Enter freight amount	7	N2			19
19	NET	Enter net amount	9	N2			20
20	DATE	Enter transaction date	6	N			21
21	TAX CODE	Enter tax code	1	AN			22
22	OK ?	Enter: Y - Yes N - No R - Retry	1	AN			14 16 14
TRANSACTION TYPE -- DM -- DEBIT MEMO							
23	CUSTOMER #	Enter customer number Press RUBOUT	6	N		Displays batch total screen	24 42
24	DOC NO.	Enter debit memo number	7	N			25
25	GROSS AMT	Enter gross accounts receivable amount	9	N2			26
26	TAX	Enter tax amount	7	N2			27

OPERATING INSTRUCTIONS		PROCEDURE NAME ARNEW	PROGRAM NAME AR021			SHEET <u>3</u> OF <u>4</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
27	FRT	Enter freight amount	7	N2			28
28	NET	Enter net amount	9	N2			29
29	DATE	Enter transaction date (mmdyy)	6	N			30
30	TAX CODE	Enter tax code	1	AN			31
31	OK ?	Enter:  Y - Yes  N - No  R - Retry	1	AN			23  25  23
TRANSACTION TYPE -- AJ -- ADJUSTMENT							
32	CUSTOMER #	Enter customer number  Press RUBOUT	6	N		Display batch total screen	33  42
33	DOC NO.	Enter invoice number	7	N			34
34	AMOUNT	Enter adjustment amount	9	N2			32
35	OK ?	Enter:  Y  N				Displays - * DOCUMENT ADDED *  Retries entry	32  32
TRANSACTION TYPE -- CA -- CASH							
36	INV #-	Enter invoice number	7	N0		AMT DUE- XXXX.XX CASH- XXXX.XX DISC- XXXX.XX"  System responds with amount due on invoice, Cash = amount due, DISC = 0	37
37	OK ?	Enter: Y - YES, cash and discount displayed are correct  N - NO, system will then prompt you for cash and discount amounts  R - Retry	1	AN			40  38  36
38	CASH-	Enter cash amount	7	N2			39

OPERATING INSTRUCTIONS		PROCEDURE NAME ARNEW	PROGRAM NAME AR021			SHEET <u>4</u> OF <u>4</u>	
STEP	SCREEN PROMPT, MESSAGE, OR CONDITION	OPERATOR RESPONSE	MAX LTH	DATA TYPE	SPECIAL ENTRY	SYSTEM RESPONSE	NEXT STEP
39	DISC-	Enter discount amount	7	N2			40
40	CHECK #-	Enter customer check number	6	N0			41
41	ABA #-	Enter customer ABA number	10	AN			36
42						Displays: Batch number Transaction total Discount total	43
43	C-CONTINUE E-END OF JOB	Enter: C  E	1	A			2 --
<b>LEGEND:</b> MAX LTH - Maximum length Data type - A Alphabetic AN Alphanumeric Nx Numeric with x decimal positions							

## RUN SHEETS

This section contains run sheets specifying the order of program execution within each procedure, the files used by each program, backup and restart procedures, and special instructions for the computer operator. One run sheet is provided for each procedure. The operator may use the run sheets to determine the setup necessary for the execution of a procedure, which files are being affected by a particular procedure, and how recovery may be made for any given procedure. The operator may want to refer to these run sheets to determine which files are required for the execution of a given procedure or which files are affected (altered) by the execution of a given procedure.

These run sheets contain the following information:

- Operator Instructions – These tell the operator what must be done to initiate the procedure properly.
  - Job Steps – Typically, these are the points at which the procedure may be restarted. Each job step may contain one or more programs. Note that once a procedure is restarted at a particular job step, it continues through the execution of not only that job step, but also the job steps that follow.
  - Programs – These programs are individual jobs or tasks executed by the computer. They are stored in the user's library as individual executable units.
- Files – These are the sources of the information used by the programs and the destination of the results to be stored for later use. These files are listed next to the particular program that uses them.
  - Input/Output/Update – This column indicates whether a file is used as input (I) or output (O), has records added to it (ADD), or is updated (U) by the program.
  - Forms and Alignment – The proper forms to be mounted during the procedure setup are specified in this box.
  - Special Instructions – This box contains special conditions that may occur during the execution of the program along with the steps that must be taken if recovery and rerun are to be performed. The reader should note, however, that in some cases special procedures are executed for backup and recovery. In these instances, the user should consult the run sheets for these procedures.

These run sheets should always be kept at the computer site so they are available in case of special or abnormal conditions.

PROCEDURE: ARMFUPD  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Inquiry/Maintenance  
Customer Masterfile

OPERATOR INSTRUCTIONS:  REQUEST = ARMFUPD						MASS STORAGE ASSIGNMENTS:	
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> RECOVERY BELOW
ARMFUPD	AR005				NO	FORMS & ALIGNMENT	
		DUMMY		IN		SPECIAL INSTRUCTIONS:  <u>RECOVERY</u> REQUEST = ARMFUPD Use inquiry mode of operation to verify file update from last transaction you entered. If transaction was not processed, re-enter last transaction before continuing.	
		PR005		IN			
		ARMAST		UPD-A			

PROCEDURE: ARMSTLST  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION **List Customer Master File**

OPERATOR INSTRUCTIONS:  REQUEST = ARMSTLST						MASS STORAGE ASSIGNMENTS:
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN? <input checked="" type="checkbox"/> YES <input type="checkbox"/> RECOVERY BELOW
ARMSTLST	AR13D				YES	FORMS & ALIGNMENT 14 7/8 x 11
		ARHEAD		I		
		ARMAST		I		SPECIAL INSTRUCTIONS:  This procedure should be run only from the system console.  <u>RERUN</u> REQUEST = ARMSTLST
		#LP1		0		

PROCEDURE: ARNEW  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Accepts and edits A/R transactions.

OPERATOR INSTRUCTIONS:						MASS STORAGE ASSIGNMENTS:
REQUEST = ARNEW						
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN? <input type="checkbox"/> YES <input checked="" type="checkbox"/> RECOVERY BELOW
ARNEW	ARD21				NO	FORMS & ALIGNMENT
		DUMMY		IN		14 7/8 x 11
		ARIND1		UPD		SPECIAL INSTRUCTIONS:  <u>RECOVERY</u>  REQUEST = ARNEW When restarting you will need to input a new {unique} batch number for the balance of transactions in the current batch. The manual batch total you input will be zero dollars/cents.  Note: The edit list will show both the original and continuation batches out of balance. These should be offsetting amounts. If they are not, check last transaction entered when system failed for error.
		ARMAST		IN		
		INFO		UPD		
		INTAB		IN		
		CARDS		OUT-A		



PROCEDURE: ARCOR  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Accepts and edits changes to A/R transactions.

OPERATOR INSTRUCTIONS:						MASS STORAGE ASSIGNMENTS:
REQUEST = ARCOR						
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN? <input type="checkbox"/> YES <input checked="" type="checkbox"/> RECOVERY BELOW
ARCOR	ARD22				NO	FORMS & ALIGNMENT
		CARDS		UPD		14 7/8 x 11
						SPECIAL INSTRUCTIONS:  <u>RECOVERY</u>  REQUEST = ARCOR When restarting - retry last transaction entered before system failed to verify correct processing, then continue.

PROCEDURE: ARUPD  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Add current transactions to the ARTRANS file. Produce cash receipts journal and invoice register.

OPERATOR INSTRUCTIONS:						MASS STORAGE ASSIGNMENTS:	
REQUEST = ARUPD							
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN?	<input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> RECOVERY BELOW
ARUPD	SORT	ARINPT		I	YES	FORMS & ALIGNMENT	
		SARINPT		0			
RARUPD1	AR100	ARHEAD		I	YES	SPECIAL INSTRUCTIONS:	
		SARINPT		I		This procedure should be run only from system console.	
		ARMAST		I			
		#LP1		0			
RARUPD2	AR110	ARHEAD		I	YES	<u>RERUN/RECOVERY</u>	
		SARINPT		I		1 <sup>st</sup> SORT- REQUEST = ARUPD	
		ARMAST		I		AR100- REQUEST = RARUPD1	
		#LP1		0		AR110- REQUEST = RARUPD2	
RARUPD3	SORT				YES	2 <sup>nd</sup> SORT- REQUEST = RARUPD3	
		ARINPT		I		COPY- REQUEST = RARUPD4	
		SARINPT		0		AR120 - REQUEST = RCVAR120	
RARUPD4	COPY	ARMAST NEWMAST		I 0	YES	RENAME- REQUEST = RARUPD6	
RCVAR120	AR120	SARINPT		I	YES		
		ARTRANS		I			
		NEWART		0			
		ARMAST		U			
		#LP1		0			
RARUPD6	RENAME	NEWART		I	YES	† Purge	
		ARTRANS		0			
		CARDS		0†			





PROCEDURE: ARSTMTS  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Prints Statements

OPERATOR INSTRUCTIONS:						MASS STORAGE ASSIGNMENTS:	
REQUEST = ARSTMTS							
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN? <input checked="" type="checkbox"/> YES <input type="checkbox"/> RECOVERY BELOW	
ARSTMTS	AR240				YES	FORMS & ALIGNMENT	
		ARMAST		I		STATEMENTS	
		ARTRANS		I		SPECIAL INSTRUCTIONS:  This procedure should be run only from system console.  Enter aging date when requested by program. {MMDDYY cr}  <u>FORMS ALIGNMENT</u> 0 = Form correctly aligned. 1 = Retry first line.  <u>RERUN</u> REQUEST = ARSTMTS	
		PLP1		0			

PROCEDURE: ARMND  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Month-End Removal of Paid (and Zero Balance) invoices.

OPERATOR INSTRUCTIONS:						MASS STORAGE ASSIGNMENTS:
REQUEST = ARMND						
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN? <input checked="" type="checkbox"/> YES <input checked="" type="checkbox"/> RECOVERY BELOW
ARMND	AR140				YES	FORMS & ALIGNMENT 1 PT STD
		ARTRANS		I		
		ARZERO		0		SPECIAL INSTRUCTIONS:  This procedure should be run only from system console.  <u>RERUN/RECOVERY</u> AR140 - REQUEST = ARMND COPY - REQUEST = RARMND1 AR160 - REQUEST = RCVAR160 RENAME - REQUEST = RARMND3 AR010 - REQUEST = RARMNDY  <u>CAUTION:</u> Do not run maintenance procedure ARMFUPD while this procedure is being run.
		#LP1		0		
RARMND1	COPY	ARMAST		0		
RCVAR160	AR160				YES	
		ARTRANS		I		
		ARZERO		I		
		ARMAST		U		
		NEWART		0		
		#LP1		0		
RARMND3	RENAME				YES	
		NEWART		I		
		ARTRANS		0		
RARMNDY	AR010				YES	
		ARTRANS		I		
RARMNDY		ARIND1		0		
		#LP1		0		



PROCEDURE: ARFPURG  
 SYSTEM: ACCOUNTS RECEIVABLE

DESCRIPTION Customer Master File Purge.

OPERATOR INSTRUCTIONS:						MASS STORAGE ASSIGNMENTS:	
REQUEST = ARFPURG							
JOB STEP	PROGRAM	FILES	UNIT	INPUT/OUTPUT UPDATE	RERUN O.K.	RERUN?	
ARFPURG	AR007				YES	<input checked="" type="checkbox"/> YES	<input checked="" type="checkbox"/> RECOVERY BELOW
		ARMAST		IN		FORMS & ALIGNMENT	
		NEWMST		OUT		SPECIAL INSTRUCTIONS:  <b>NOTE:</b> This procedure should be run only from the system console.  <u>RERUN/RECOVERY</u> for: AR007- REQUEST = ARFPURG RENAME- REQUEST = RARFPRG1 AR130- REQUEST = RARFPRG2  <b>CAUTION:</b> Do not run maintenance procedure ARMFUPD while this procedure is being run.	
		SYSLIST		OUT			
RARFPRG1	RENAME				YES		
		NEWMST		IN			
		ARMAST		OUT			
RARFPRG2	AR130				YES		
		ARHEAD		IN			
RARFPRG2		ARMAST		IN			
		LPL		OUT			

## REPORT DESCRIPTIONS

Accounts Receivable enables the user to easily produce reports that give comprehensive information on the customers to the accounts receivable master file. These reports give detailed information on each customer, his credit history, and his sales activity. In addition, they help to stop errors before they cause problems in the files by giving hard-copy information on activities in Accounts Receivable itself (for example, invoices and transactions that have been processed during the day). There are reports designed to help the user trace and find errors and problems in the files (see Audit Trail Report below). The following sections describe these reports in detail. Each section gives a general description of the report and what it is used for, tells how to request or produce the report, and gives a detailed description of what the various fields and columns in each report mean.

### CUSTOMER LIST

This report gives one entry for each customer in the user's master file. It gives the name, address, credit limit, and year-to-date sales for each customer. The total number of customers listed is printed at the end of the report. This report is useful as a record of all the user's customers. The report is produced by procedure AR130 and the master file purge procedure, ARFPURG. Instructions on how to execute these procedures are given in the run sheets for the procedures. Figure 2-21 gives a sample of this listing.

2/12/77		CONTROL DATA CORP. CUSTOMER MASTERFILE LISTING			CAR130		PAGE 1	
CUST#	NAME	ADDRESS LINE 1	ADDRESS LINE 2	CITY	ST ZIP	CR LIM	YTD SALES	
1	TELTRONICS CORP.	3214 ROSECRANS ST.	SUITE 2345	EL SEGUNDO	CA 90245	2,500	236,073	
2	HORT INDUSTRIES	1334 N. 116TH ST.	SUITE 200	LOS ANGELES	CA 90645	10,000	25,952	
3	ROBERT BURNAM CO.	1234 ELM STREET		HOLLYWOOD	CA 93687	1,250	2,548	
4	ACME AUDIO SUPPLY	1234 ELM STREET	SUITE 117	SAN DIEGO	CA 90157	1,500	4,616	
5	DMA TRANSFER	12345 ROM BOARD WAY	CHANNEL 0	EBCDIC	CA 90000	0	0	
6	L.A. PRESS	1145 E. JACKSON ST		LOS ANGELES	CA 95888	0	12,985	
25	ARROW IMPORTS	12255 S. ADAMS BLVD		LOS ANGELES	CA 95000	3,000	500	
55	WOLF ENTERPRISES	115 NORDOFF		LOS ANGELES	CA 95111	3,000	100	
586	HONDO SPECIALTIES CO INC	10630 GARFIELD AVF		LA	CA 94839	0	1,900	
754	COMPUSOURCE	2221 ROSECRANS	SUITE 220	EL SEGUNDO	CA 90245	100	0	
888	INDUSTRIAL POLYCHEMICAL	15709 MAIN ST		GARDENA	CA 90247	1,000	0	
999	HOBBS, INC.	440 ARROYO TERRACE		ALHAMBRA	CA 91234	2,000	10,705	
2343	SUNTORY	NATIONAL PLACE	5736-89 ST.	LA	CA 98273	0	0	
5000	AUTOMATED INDUSTRIES	1818 ALABAMA DR.		EL MONTE	CA 91222	0	12,000	
8900	ADVANCED VALVE CO	2500 E. AIMSLEY		NEWPORT BEACH	CA 91010	10,000	5,500	
23456	BRADLEY TOY CO.	12988 WARREN PLACE	C/O BILL	WOODLAND HILL	CA 95444	10,000	5,300	

END OF LIST. 16 CUSTOMERS LISTED.

Figure 2-21. Customer Master File Listing

2/12/77		CONTROL DATA CORP.		INVOICE REGISTER				PAGE 1		
INVOICE#	CUST#	NAME	GROSS AMT	TAX	FREIGHT	NET AMT	TR			
2000	754	COMPUSOURCE	1,500.00	.00	250.00	1,250.00	IN			
2001	1	TELTRONICS CORP.	1,500.00	.00	200.00	1,300.00	IN			
2002	754	COMPUSOURCE	1,500.00	.00	.00	1,500.00	IN			
2003	6	L.A. PRESS	500.00	100.00	.00	400.00	IN			
41	754	COMPUSOURCE	50.00-	.00	.00	50.00-	CM			
END OF REPORT			GRAND TOTALS	4,950.00	100.00	450.00	4,400.00			
							400.00	CALIF TAXABLE		
							4,000.00	CALIF NON-TAX		
							.00	OUT OF STATE		

Figure 2-22. Invoice Registers

## INVOICE REGISTER

The invoice register contains an entry for each new invoice entered into Accounts Receivable. The listing gives the invoice number, customer number and name, gross amount, tax, freight amount, net amount, and transaction type. This report can be used to review the day's invoices or to check for the entry of any given invoice or errors in that entry. The report is produced when procedure ARUPD is executed. Instructions on how to use this procedure are given in the run sheet for this procedure. A sample of this report is given in figure 2-22.

### CASH RECEIPTS JOURNAL

This report summarizes the cash intake for the day. It contains an entry for each intake cash item applied to Accounts Receivable. For each entry, the following information is included: the customer number and name, check number, check amount, cash applied, discount allowed, and invoice and ABA numbers. The report is provided to aid in keeping track of cash intake. This report is produced by running procedure ARUPD. The run sheet for this procedure gives instructions on how to execute this procedure. Figure 2-23 shows a sample of this report.

### ACCOUNTS RECEIVABLE SUMMARY

This report gives the balance and the net change amounts for the day. It gives the beginning balance, then lists amounts for invoices, cash receipts, discounts, credit

CONTROL DATA CORP.							DEPOSIT VOUCHER 2/12/77	
CASH RECEIPTS JOURNAL			PAGE 1					
CUST#	CUSTOMER NAME	CHECK NUMBER	CHECK AMOUNT	INVOICE NUMBER	CASH APPLIED	DISCOUNT ALLOWED	ABA #	AMOUNT
25	ARROW IMPORTS	000000	10.00	3000	10.00	.00		10.00
		000000	50.00	3000	50.00	.00		50.00
	3 ROBERT BURNAM CO.	000005	499.00	3001	499.00	.00		499.00
END OF A/R CASH		3 CHECKS...	559.00		559.00			
							TOTAL	559.00 *

Figure 2-23. Cash Receipts Journal

memos, and adjustments and gives the new accounts receivable balance. The report may be used by those with an accounting function to check the transactions entered against the system during the day's processing. This report is produced during the execution of procedure ARUPD. The run sheet for the procedure gives instructions on how to execute it. Figure 2-24 shows a sample of this report.

### DETAILED ACCOUNTS RECEIVABLE AGING REPORT

This listing contains an entry for each customer having one or more invoices. Each invoice for that customer is listed and the amounts of the invoices are broken down into 30-, 60-, 90-, and over-90-day categories. The report may be used to check the payment history of any of the user's customers. This report is printed by procedure AR200. The run sheet for that procedure gives instructions on how to execute it. A sample of the report and an explanation of the use and meaning of the fields and columns on it is given in figure 2-25.

### SUMMARY ACCOUNTS RECEIVABLE AGING REPORT

This report, produced by procedure AR220, summarizes the invoices for each customer, breaking them down into 30-, 60-, 90-, and over-90-day categories. The run sheet for that procedure gives instructions on how to execute it. A sample of the report is given in figure 2-26.

### YEAR END SALES DATA REMOVAL REPORT

This report is produced during end-of-the-year processing and lists the names and addresses of all customers that were active during the year, along with the year-to-date sales amounts. The report is produced by procedure ARYND. Instructions on how to execute the procedure are given in the run sheet for the procedure. A sample of the report is given in figure 2-27.

### MONTH END SUMMARIES

These separate printed reports are produced during month-end processing. They give information such as the number of accounts receivable records eligible to be removed and zeroed, the number of records, and dollar amount for the accounts receivable transaction file. These reports are produced by procedure ARMND. A sample of this report is given in figure 2-28.

### ACCOUNTS RECEIVABLE TRANSACTION EDIT LISTING

This listing contains a line entry for each transaction entered during the day's processing and, at the end of the report, gives computer batch totals, batch totals as entered by the operator on batch header cards, and the difference. The report may be run at any time during the day (for example, to check batch totals), but must be run at the end of the day's processing. The listing is produced by procedure AREDLST. Instructions on how to execute this procedure are given in the run sheet for the procedure. A sample of the report and descriptions of the contents of the fields and columns in it are given in figure 2-29.

### STATEMENTS

A statement is printed for each open item. Each statement contains the customer's name and address. In addition, a line is printed on the statement for each open invoice giving the invoice number, date, gross amount, discount, and amount due. The invoice number and the net amount due are duplicated on a stub that is to be returned by the customer with his payment. The statements are printed by procedure AR240. The run sheet for this procedure gives instructions on how to run the procedure. A sample statement is given in figure 2-30.

AS OF 6/02/76 RUN- 2/12/77 CAR200 A/R SUMMARY	
14,773.77	BEGINNING BALANCE A/R
5,000.00	INVOICES
559.00-	CASH RECEIPTS
.00	DISCOUNTS
53.30-	CREDIT MEMOS
.00	DEBIT MEMOS
.00	ADJUSTMENTS
19,164.77	NEW BALANCE A/R

Figure 2-24. Accounts Receivable Summary Report

CONTROL DATA CORP.

AS OF 4/12/78 RUN- 2/12/77 DETAILED ACCOUNTS RECEIVABLE AGEING CAR200 PAGE 1

ACCOUNT NUMBER	ACCOUNT NAME	CR LIMIT LAST PAY	INVOICE NUMBER	TRANS TR DATE CD	TRANS AMOUNT	INVOICE BALANCE	AGEING			
							CURRENT	31-60	61-90	OVER 90
①	TFLTRONICS COMP. ( 213) 111-7584 J.R. SMILEY	2,500 4/01/76	500	3/15/75 IN	1,000.00	1,000.00				
			500	4/01/76 CA	750.00-	250.00				
			500	10/03/76 DP	200.00	450.00				
			515	4/01/75 IN	300.00	300.00				450.00
			2001	2/12/77 IN	1,500.00	1,500.00				300.00
			9999999	10/09/76 CM	65.00	65.00	1,500.00			
1 * ACCOUNT TOTALS *						2,315.00	1,565.00	65.00		750.00
2	MORT INDUSTRIES ( 213) 333-4567 KEY JACKSON	10,000 4/01/76	705	5/01/75 IN	1,000.00	1,000.00				
			705	10/15/76 CM	50.00-	950.00				950.00
			1003	5/08/75 IN	800.00	800.00				800.00
2 * ACCOUNT TOTALS *						1,750.00				1,750.00
3	ROBERT BURNAM CO. ( 213) 445-5445 R. BURNAM	1,250 4/01/76	3001	6/30/75 IN	500.00	500.00				
			3001	2/12/77 CA	499.00-	1.00				1.00
				9999999	10/09/76 CM	60.00-	60.00-	60.00-		
3 * ACCOUNT TOTALS *						59.00-	60.00-			1.00
4	ACME AUDIO SUPPLY ( 714) 255-4879 A.R. GREEMLY	1,500 10/09/76	900	6/15/75 IN	1,500.00	1,500.00				
			900	10/23/76 DM	125.00	1,625.00				1,625.00
			54010	5/18/76 IN	10.00	10.00				
			54010	10/09/76 CA	5.00-	5.00	5.00			
4 * ACCOUNT TOTALS * * OVER CREDIT LIMIT *						1,630.00	5.00			1,625.00
5	DMA TRANSFER ( 213) 123-4567	0 0/00/00	52123	5/01/76 IN	20.00	20.00				
			52123	10/10/76 CM	5.00-	15.00				15.00
			54012	5/18/76 IN	18.00	18.00				
			54012	10/09/76 AJ	45.00	63.00				
5 * ACCOUNT TOTALS *						78.00	63.00	63.00		15.00
6	L.A. PRESS ( 213) 466-5987 C. RIPLEY	0 7/15/76	1001	5/08/75 IN	500.00	500.00				
			1001	10/05/76 CM	100.00-	400.00				
			2003	2/12/77 IN	500.00	500.00	500.00			400.00
6 * ACCOUNT TOTALS *						900.00	500.00			400.00

Notes:

- ① Includes - Name of account  
Phone number  
Person to contact
- ② Date of last payment

Figure 2-25. Detailed Accounts Receivable Aging Report (Sheet 1 of 2)

CONTROL DATA CORP.

5 OF 6/02/76 R04- 2/12/77 DETAILED ACCOUNTS RECEIVABLE AGEING CAR200 PAGE 3

ACCOUNT	ACCOUNT NAME	CA LIMIT LAST PAY	INVOICE NUMBER	TRANS TR DATE CD	TRANS AMOUNT	INVOICE BALANCE	A G E I N G			
							CURRENT	31-60	61-90	OVER 90
5000	AUTOMATED INDUSTRIES ( 213) 555-4500		552 852	1/01/75 IN 10/09/76 AJ	400.00 30.00	400.00 430.00				430.00 430.00
5000	* ACCOUNT TOTALS *					430.00				430.00
8900	ADVANCED VALVE CO ( 714) 555-2301	10,000	1234	5/07/75 IN	2,000.00	2,000.00				2,000.00
	J. ROBERTS	5/16/75	1235	5/07/75 IN 10/09/76 CA	1,500.00 1,200.00-	1,500.00 300.00				300.00
8900	* ACCOUNT TOTALS *					2,300.00				2,300.00
23456	BRADLEY TOY CO. ( 213) 666-0120	10,000 10/09/76	506 506 605 8888	3/01/75 IN 10/01/76 CM 4/09/75 IN 9/14/76 IN	300.00 75.00- 800.00 800.00	300.00 225.00 800.00 800.00				225.00 800.00
			99987	2/02/75 IN	10,000.00	10,000.00				
			99987	5/16/75 CA	2,500.00-	7,500.00				
			99987	5/16/75 DS	250.00-	7,250.00				
			99987	5/16/75 CA	1.23-	7,248.77				
			99987	5/18/76 CA	7,000.00-	248.77				
			99987	10/27/76 DM	100.00	348.77				
			99987	10/09/76 AJ	75.00-	273.77				273.77
23456	* ACCOUNT TOTALS *					2,098.77	800.00			1,298.77
GRAND TOTALS					19,164.77	9,925.00	15.00			9,224.77

Figure 2-25. Detailed Accounts Receivable Aging Report (Sheet 2 of 2)

CONTROL DATA CORP.

45 OF 6/02/76 SUMMARY ACCOUNTS RECEIVABLE AGEING CAR220 PAGE 1

ACCT NUMBER	NAME	AVG. PAY DAYS	CREDIT CODE	YTD SALES	A/R BALANCE	A G E I N G				
						CURRENT	31-60	61-90	OVER 90	
1	ELECTRONICS COM.	48	2500	237,373	2,315.00	1,565.00			750.00	
2	MART INDUSTRIES	40	1000	25,952	1,750.00				1,750.00	
3	ROBERT BURNHAM CO.	93	1250	2,545	59.00-	60.00-			1.00	
4	ACE AUDIO SUPPLY	40	1500	4,616	1,630.00	5.00			1,625.00	
5	DMA TRANSFER				78.00	63.00	15.00			
6	L.A. PRESS	55		13,385	900.00	500.00			400.00	
10	L.A. PRESS	55		13,385	1,000.00	1,000.00				
25	AMPO INFANTS	52	3000	500	447.00	148.00-			595.00	
55	WOLF ENTERPRISES	1.5	3000	100	75.00				75.00	
88	WOLF ENTERPRISES	1.5	3000	100	500.00	500.00				
586	MUNDO SPECIALTIES CO INC			1,900	2,000.00	2,000.00				
754	COMPUSOURCE		100	2,750	2,950.00	2,950.00				
999	HONS, INC.	55	2000	10,705	750.00	750.00				
5000	AUTOMATED INDUSTRIES	38		12,000	430.00				430.00	
8900	ADVANCED VALVE CO	24	10000	5,500	2,300.00				2,300.00	
23456	BRADLEY TOY CO.	47	10000	5,300	2,098.77	800.00			1,298.77	
GRAND TOTALS					19,164.77	9,925.00	15.00			9,224.77

Figure 2-26. Summary Accounts Receivable Aging Report

LIST#	NAME/ADDRESS	YTD SALES
1	TELTRONICS COAP. 3214 ROSECRAVS ST. SUITE 2345 EL SEGUNDO , CA 90245	237,373
2	MOAT INDUSTRIES 1374 N. 116TH ST. SUITE 280 LOS ANGELES , CA 90645	25,952
3	ROBERT BURNAM CO. 1234 ELM STREET HOLLYWOOD , CA 93687	2,548
4	ACME AUDIO SUPPLY 1234 ELM STREET SUITE 117 SAN DIEGO , CA 90157	4,616
5	DNA TRANSFER 12345 ROP BOARD WAY CHANNEL 0 EBCDIC , CA 90000	0
6	L.A. PRESS 1145 E. JACKSON ST LOS ANGELES , CA 95888	13,385
25	ARROW IMPORTS 12255 S. ADAMS BLVD LOS ANGELES , CA 95000	500
55	WOLF ENTERPRISES 115 WARDOFF LOS ANGELES , CA 95111	130
586	HONDO SPECIALTIES CO INC 10630 GARFIELD AVE LA , CA 94839	1,900
754	COMPUSOURCE 2221 ROSECRAVS SUITE 220 EL SEGUNDO , CA 90245	2,750
888	INDUSTRIAL POLYCHEMICAL 15709 MAIN ST GARDENA , CA 90247	0
999	HORS, INC. 440 AKROYD TERRACE ALHAMBRA , CA 91234	10,705
2343	SUNTORY NATIONAL PLACE 5736-89 ST. LA , CA 98273	0
5000	AUTOMATED INDUSTRIES 1818 ALABAMA DR. EL MONTE , CA 91222	12,000
8900	ADVANCED VALVE CO 2500 E. AIMSLEY NEWPORT BEACH, CA 91010	5,500
23456	BRADLEY TOY CO. 12888 WARREN PLACE C/O BILL WOODLAND HILL, CA 95444	5,300
END OF JOB.	TOTAL SALES-	322,629

Figure 2-27. Year End Sales Data Removal Report

2/12/77 CAR141 CREATE ARZERO -FILE OF ZERO BALANCE INVOICES-

E0J. 56 RECORDS ON ANTRANS.  
3 OF WHICH ARE ELIGIBLE TO BE REMOVED.

2/12/77 REMOVE CLOSED ITEMS FROM A/R FILE CAR160

E0J. 56 RECORDS ON OLD FILE. \$19,164.77 A/R AMT ON OLD FILE.  
0 ZEROED RECORDS REMOVED.  
0 RECORDS COMBINED.  
56 RECORDS ON NEW FILE. \$19,164.77 A/R AMT ON NEW FILE.

Figure 2-28. Month-End Summary Reports

6/03/77				A/R TRANSACTION EDIT				CAR025	PAGE 1
KEY	TR	CUST	INVOICE	GROSS	TAX	TX	FREIGHT	NET	COMMENTS
(1)	BCH	CD	NUMBER	AMOUNT	AMOUNT	CD	AMOUNT	AMOUNT	
1000001	100	IN	1 23	50.00	.00	C	.00	50.00	
1000002	100	IN	2 24	.00	.00		.00	.00	
1000003	100	IN	3 25	50.00	.00	(4)	.00	50.00	
IN BATCH TOTALS				100.00					
HM CARD				100.00					
DIFFERENCE				.00					

Notes:

- (1) Record key in indexed file
- (2) Transaction batch number
- (3) Transaction code
  - IN - Invoice
  - CA - Cash adjustment
  - DM - Debit memo
  - CM - Credit memo
  - AJ - Adjustment
- (4) Tax code
  - C - California taxable
  - N - California nontaxable
  - O - Out of state

6/03/77				A/R TRANSACTION EDIT				CAR025	PAGE 2
KEY	TR	CUST	INVOICE	GROSS	TAX	TX	FREIGHT	NET	COMMENTS
	BCH	CD	NUMBER	AMOUNT	AMOUNT	CD	AMOUNT	AMOUNT	
1010001	101	CM	3 56	50.00	.00		.00	50.00	
CM BATCH TOTALS				50.00					
HM CARD				50.00					
DIFFERENCE				.00					

6/03/77				A/R TRANSACTION EDIT				CAR025	PAGE 3
KEY	TR	CUST	INVOICE	GROSS	TAX	TX	FREIGHT	NET	COMMENTS
	BCH	CD	NUMBER	AMOUNT	AMOUNT	CD	AMOUNT	AMOUNT	
1020001	102	DM	3 56	50.00	.00		.00	50.00	
DM BATCH TOTALS				50.00					
HM CARD				50.00					
DIFFERENCE				.00					

Figure 2-29. Accounts Receivable Transaction Edit Listing (Sheet 1 of 2)

6/03/77 A/R TRANSACTION EDIT CAR025 PAGE 4

KEY	TR	CUST	INVOICE	TRANSACTION	AMT PREV DUE	DISCOUNT	NEW AMT DUE	COMMENTS
BLN	CD	NUMBER	NUMBER	AMOUNT	ON INVOICE	AMOUNT	ON INVOICE	
1030001	103	AJ	2	26	50.00	.00	50.00	
		AJ BATCH TOTALS			50.00			
		MM CARD			50.00			
		DIFFERENCE			.00			

6/03/77 A/R TRANSACTION EDIT CAR025 PAGE 5

KEY	TR	CUST	INVOICE	TRANSACTION	AMT PREV DUE	DISCOUNT	NEW AMT DUE	COMMENTS
BLN	CD	NUMBER	NUMBER	AMOUNT	ON INVOICE	AMOUNT	ON INVOICE	
1040001	104	CA	1	23	50.00	.00	.00	
1040002	104	CA	1	23	.00	.00	.00	
1040003	104	CA	1	23	.00	.00	.00	
		CA BATCH TOTALS			50.00	.00	.00	
		MM CARD			100.00	.00	.00	
		DIFFERENCE			50.00-	.00	.00	

END OF JOB. THERE WERE 1 BATCHES OUT OF BALANCE, NO TRANSACTIONS WITH WARNINGS, NONE WITH TERMINAL ERRORS.  
 GRAND TOTAL NET CHANGE IN A/R \$100.00

Figure 2-29. Accounts Receivable Transaction Edit Listing (Sheet 2 of 2)

TELEADVICS CORP.  
 1214 ROSECRANS ST. 1 060276  
 SUITE 2345  
 EL SEGUNDO CA 92245

0515	500	1000.00	INVOICE	0401	750.00			
1003	500	200.00	DR MEMO			450.00	5000M	450.00
0401	515	300.00	INVOICE			300.00	515M	300.00
0212	2001	1500.00	INVOICE			1500.00	2001M	1500.00
			CR MEMO	1009	65.00-	65.00	9999999CM	65.00

65.00 1500.00 750.00 2315.00 2315.00

Figure 2-30. Statement



This section contains external specifications for the accounts receivable module. Therefore, it serves two separate purposes:

- Reference – Because of its organization and the table of contents in this manual, this section provides an easy-to-use reference and source of information for the reader who is already familiar with the module.
- Definition – This section defines the module, its capabilities, its limitations, the user interface with the module, and the interface between the module and other systems. Thus, the reader may look to this section to determine what can and cannot be expected from the system.

This section is not intended to be used as an introduction or learning text for the accounts receivable module. It is a reference document to enable a user acquainted with the application area and the use of the accounts receivable module to find details about the system. The reader should already be familiar with the information presented in section 2, User Information.

The remainder of this section is divided into separate subsections, one for each of the areas that is visible to and affects the reader. These areas are: data entry and capture, control statements and commands, reports, and other functions and services.

## DATA ENTRY AND INFORMATION CONTROL

The data that can be entered and displayed through use of this module consists of the information needed to keep accounts receivable information on each of the user's customers.

Since this information is summarized in the reports provided by the system, the reader can find the information that may be entered and updated in this module by referring to the sample reports provided in the User Information section. A detailed description of the data items entered is given in the Operating Instructions in section 2. The operator at the CRT terminal can perform three general types of tasks on the information stored within the system:

- Records can be added and deleted from the accounts receivable master file, and information in that file can be changed.
- Transactions of the following types may be posted against the system: cash receipts, invoices, credit and debit memos, and cash adjustments.
- Inquiries may be made so that the user of a CRT terminal may inspect information contained in the user's accounts receivable system.

The data to be used by this module is entered through the CRT terminal using the interactive procedures provided. Once the operator has requested a given type of operation, each field he must enter is automatically prompted by a descriptive message on the CRT. As data is entered into the system, the procedure accepting that data performs a careful editing and checking of the data. Fields are edited to produce proper decimal alignment of numeric fields and proper justification of alphabetic and alphanumeric fields. Wherever possible, a check has been provided to ensure correct data entry. In Accounts Receivable 1, a total amount is computed for each batch of transactions entered. This total is compared with a total computed and entered by the operator and the operator is notified of any discrepancy.

As the operator enters data, the system displays two general types of messages: the prompt, which indicates to the operator what he is to enter next, and the system responses and messages, which tell the operator of any abnormal or special conditions. The prompts used in Accounts Receivable during interactive use of the CRT terminal, as well as system responses and messages, are shown in the operating instructions for the appropriate procedure, in section 2.

## INQUIRY

The reader should note that each of the procedures used to update information contained in system files first displays the information that the operator may want to update. Thus, he can execute these procedures without modifying the information displayed as a means of inquiry to information stored in the system. The information available directly to the user through this inquiry facility is the same as the information described above in the discussion of the maintenance facility.

## DATA CAPTURE FROM OTHER MODULES

Order Entry/Invoicing creates transactions for data processed by Accounts Receivable and automatically adds them to the accounts receivable transaction file.

## STATEMENTS AND COMMANDS

Since the operator interacts with the application module through the CRT terminal, the statements and commands used to initiate procedures, to control these procedures while they execute, and to terminate procedures provide the human-machine interface. To facilitate communication across this interface, these statements and commands have been given a format that is simple and yet powerful enough to enable the user to perform any tasks required. In Accounts Receivable there are two basic types of commands and statements: job control language and procedure control language.

## JOB CONTROL LANGUAGE

This language is used to initiate procedures and to request menus. The commands in this language are only applicable and may only be used when the terminal at which the operator is working is not currently executing a procedure. The general format for this job control language is:

System prompt: REQUEST=

User entry:  $\left. \begin{array}{l} \text{menu code (AR)} \\ \text{procedure name} \end{array} \right\}$

Entering the name of a procedure causes the operating system to initiate execution of that procedure. Entering the menu code, AR, causes the operating system to display the names and descriptions of the procedures in Accounts Receivable. At the end of this list is the prompt:

ENTER PROGRAM NUMBER [ ]

The user may then enter the number of the procedure he wishes to execute. (This number is taken from the list displayed on the screen.)

In the case of program or system failure during procedure execution, it is also possible to execute job steps within a procedure, even though the names of these job steps do not appear in the menu for the module. However, the user should be aware that arbitrarily executing a job step in the middle of a procedure (without having executed the previous job steps) could destroy the integrity of the files utilized by the procedure. Thus, executing any job step within a procedure must be done with extreme caution, only after consulting the appropriate run sheet for the use of that job step during restart and only after performing all the steps and obeying all the restrictions specified in that run sheet.

## PROCEDURE CONTROL ENTRIES

These are the entries the operator makes while running a procedure from his terminal. Thus, in Accounts Receivable, the procedure control entries consist of all those used to enter data and to update information stored in the system. For the most part, these entries are data that is entered in response to prompts displayed by the system, though in some cases the operator may also enter options that allow him to choose from among different blocks of information he may wish to update or from among different types of entries and records he may wish to create. The operating instructions in the User Information section contain a set of general instructions for the use of the CRT terminal that specify the general format of entries made by the operator and individual operating instructions for each procedure that calls for interactive communication from the operator. The user should consult both of these sources for information on the format and content of the entries to be made during the execution of any given procedure from the CRT terminal.

## REPORTS

The reports printed by Accounts Receivable provide both a source of information and a means of obtaining a permanent record of information stored within the system. These reports provide the information that the user needs related to outstanding accounts, individual customer credit positions, and incoming cash. Each of the reports is obtained by

initiating the procedure that produces it from the CRT terminal. A detailed description of each of these reports, including the name of the procedure that produces each one, is given in the User's Guide section and in appendix B. The following are brief summaries of the contents of each report:

- The customer list gives information on each individual customer in the user's master file.
- The invoice register lists information on each invoice entered into Accounts Receivable.
- The cash receipts journal summarizes the cash intake for the day and contains an entry for and information on each intake cash item applied to Accounts Receivable.
- The accounts receivable summary gives the balance and net change amounts for the day including the beginning balance, amounts for invoices and cash receipts, discounts, credit memos, adjustments, and the new accounts receivable balance.
- The detailed accounts receivable aging report lists an entry for each customer having one or more invoices. Each of the customer's invoices is listed with the amounts of the invoices broken down into 30-, 60-, 90-, and over-90-day categories.
- The summary accounts receivable aging report summarizes the invoices for each customer, breaking them down into 30-, 60-, 90-, and over-90-day categories.
- The year-end sales data removal report is produced during end-of-the-year processing and lists the names and addresses of all customers that were active during the year along with the year-to-date sales amounts.
- The month-end summaries are separate one-page reports produced during month-end processing that summarize information on the accounts eligible to be removed and zeroed.
- The accounts receivable transaction edit listing contains a line for each transaction entered during the day's processing.

## OTHER SERVICES AND FACILITIES

### STATEMENTS

One of the most useful services provided by Accounts Receivable is the printing of statements for all open items. Each statement contains the customer name and address and thus is ready to be mailed to the customer. In addition, the statement contains an entry for each open invoice with the invoice number, date, gross amount, discount, and amount due. The invoice number and net amount due are duplicated on a stub so that portion of the statement may be returned by the customer with his payment, ensuring that the payment is credited to the correct account. The statements are printed by procedure AR240. Refer to the run sheet for this procedure in the User's Guide section for information on how to run this procedure.

This section contains information on the design and implementation of the accounts receivable module and is of interest to personnel who have questions and problems concerning the installation of the manufacturing and distribution system modules at their site. This section explains the internal organization and functioning of Accounts Receivable and thus enables an applications programmer at the user's site to solve problems concerning the internal functioning of the procedure and programs in this module. This section contains several different kinds of implementation and design information:

- Organization - The organization, structure, and overall design of the module
- Program information - A narrative describing the task performed by each program in the module
- File information - Tables giving the layout of each file, with one table listing the programs that reference the file.

**MODULE ORGANIZATION AND STRUCTURE**

Accounts Receivable, like other modules in the manufacturing and distribution system, is organized into procedures, each composed of procedure steps, each of which is composed of programs. The operator at a CRT terminal executes procedures. If recovery for a given procedure becomes necessary, the operator should refer to the run sheets for the action to be taken and the procedure steps to be executed. An overview of the organization of the programs from which the procedures are formed and the files these programs operate on within the accounts receivable module is given in figure 4-1. The structure and composition of each procedure may be found in the run sheet for that procedure in the User Information section of this manual. These run sheets contain the names of the procedure steps within each procedure and the names of the programs that make up each of these procedure steps.

**PROGRAM NARRATIVES**

The following program narratives give brief descriptions of the particular programs within Accounts Receivable. It should be kept in mind that the operator at a terminal does not execute individual programs, but rather a procedure or procedure steps, each of which is composed of one or more programs. Thus, the reader may have to refer to several program narratives to obtain a description of the programs within a given procedure and the task it performs. The run sheet together with the program narratives for the programs listed on the run sheet provides a comprehensive description of the task performed by a given procedure. Since there is a separate narrative for each individual program, the reader may learn what part of a procedure's task is performed by which program.

**AR005 ACCOUNTS RECEIVABLE MASTER FILE UPDATE**

This program adds, changes, and flags for deletion records on ARMAST via the CRT. If records are flagged for deletion, AR007 must be run to actually omit the records.

**AR007 REMOVE FLAGGED RECORDS FROM ARMAST**

This program reads ARMAST and creates NEWMST file of all records not flagged for deletion. The program also lists all records removed.

**AR010 READS ARTRANS FILE AND CREATES AN INDEXED FILE ARIND1**

ARIND1 has document number as the key. It is used to validate transaction input. The program prints total accounts receivable at the end of the run. This program is run only at month-end.

**AR021 CRT TRANSACTION INPUT**

This program adds to the cards file via CRT input, edits all input, and updates ARIND1. AR025 must be run after this program.

**AR022 CORRECT TRANSACTION ON CARDS**

This program asks for a key, and then displays that record from CARDS on the CRT. A BH transaction cannot be modified. The transaction code cannot be modified, but most other fields can be changed. This program does not add records to CARDS (use AR021 for that), neither does it delete transactions (change the amount to zero). The table below shows which fields may be updated.

<u>Transaction</u>	<u>Fields Eligible for Update</u>	<u>Non-Update Fields</u>
BH	-none	-all-
CA	Customer number, invoice number, cash amount, discount amount	Customer check number, ABA number
AJ	Customer number, invoice number, adjustment amount	
IN,CM,DM	Customer number, invoice number, gross amount, freight tax amount, tax code	Net amount, invoice date

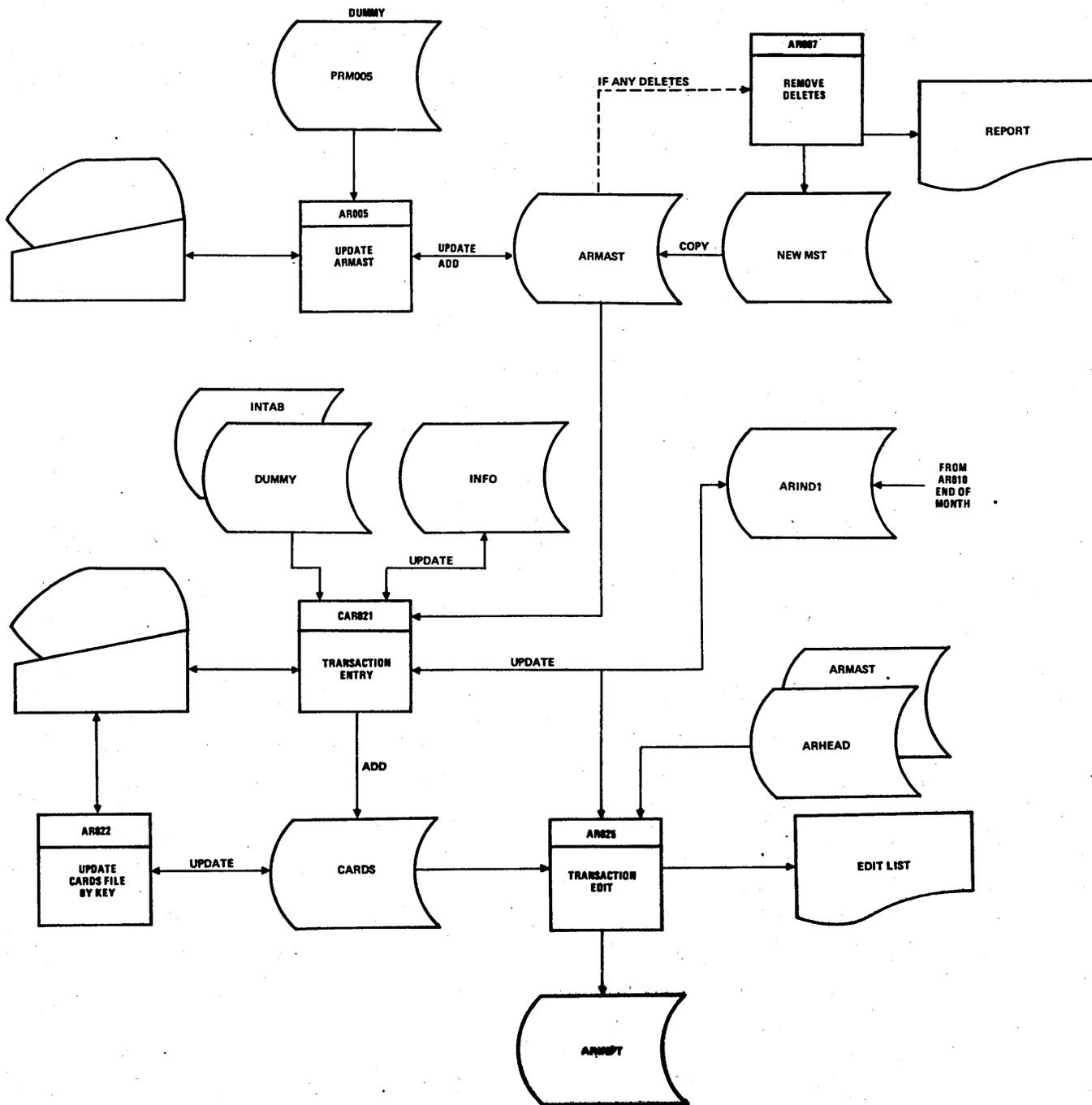
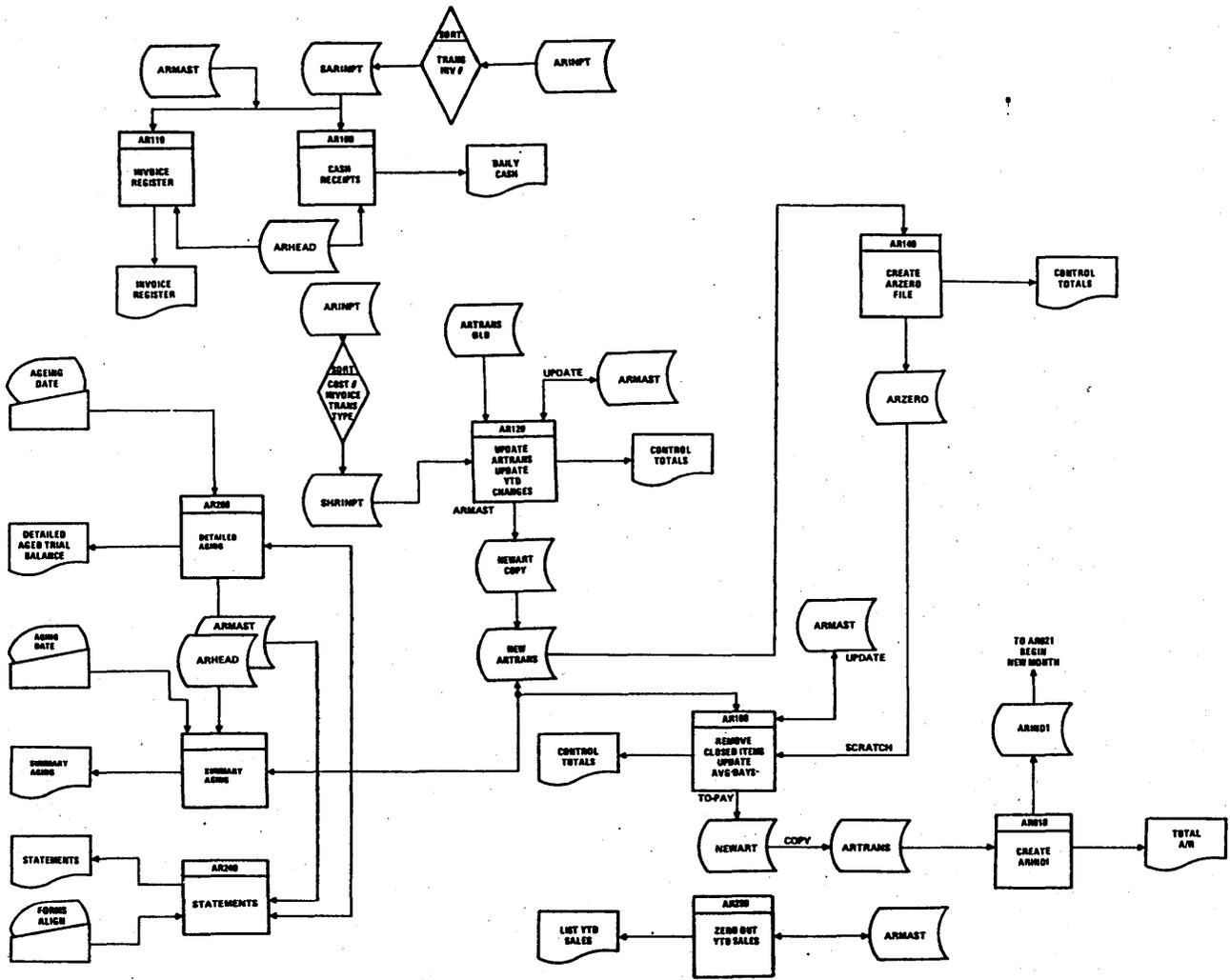


Figure 4-1. Accounts Receivable Overview (Sheet 1 of 2)



0613

Figure 4-1. Accounts Receivable Overview (Sheet 2 of 2)

**AR025 CARD TRANSACTION INPUT**

The CARDS file created by CAR021 is read to produce an edit listing and create file ARINPT. Batches are balanced and the key of each transaction is listed.

**AR100 READS SARINPT**

This program reads the SARINPT (sorted ARINPT) file containing new entries and produces the cash receipts journal report. Non-cash transactions from SARINPT are ignored.

**AR110 READS SARINPT**

This program reads sorted ARINPT (SARINPT) and chains to ARMAST for name. The program produces the invoice register and ignores all non-invoice records on SARINPT. A sales summary by tax type is listed on a separate page.

**AR120 READS SARINPT**

This program reads sorted ARINPT (SARINPT) and merges it with the old ARTRANS file to create an updated file, NEWART. The year-to-date sales field in ARMAST is

updated by new IN,CM, DM transactions. Control totals are printed at the end of job. Separate DS transactions are created on NEWART for each discount amount on any CA transaction on SARINPT.

#### **AR130 MASTER FILE LIST**

This program reads ARMAST and produces a master file listing.

#### **AR140 PRODUCE ARZERO**

This program reads the ARTRANS file and creates a file, ARZERO, of invoices which have zero amounts due on them.

#### **AR106 REMOVE PAID INVOICES**

This program inputs the ARTRANS file and the ARZERO file and removes all transactions for those invoices which are paid off (i.e., those invoices which are on ARZERO file). The program creates a new ARTRANS file with all transactions having a P (previous month) history code. The program updates average pay days and total number invoices fields in ARMAST and combines up to 9999999 accounts for each customer into one CM transaction.

#### **AR200 DETAILED AGING**

This program reads the ARTRANS and ARMAST files and produces a detailed open item aged trial balance report.

#### **AR220 SUMMARY AGING**

This program reads the ARTRANS and ARMAST files and produces a summary aged trial balance report.

#### **AR240 STATEMENTS**

This program reads the ARTRANS file and the ARMAST file and produces customer statements. These are open item statements with aged amounts.

#### **AR250 YEAR-END UPDATES**

This program zeroes out the year-to-date sales field on ARMAST for each customer. Before it is zeroed, the year-to-date sales report is printed.

#### **FILE/PROGRAM CROSS REFERENCE**

The file/program cross reference provides a quick reference for determining which programs affect and which are affected by a given file. The applications programmer responsible for the maintenance of the Accounts Receivable module should refer to this table to determine the possible scope and effect of changes to programs and files that he is considering.

#### **FILE DESCRIPTIONS**

These layouts describe individual fields within the records of each file. For each field within the record of a file, these layouts give the field description, size, location, data format (alphabetic, numeric, or alphanumeric), and number of decimal positions to the right of the decimal point for numeric fields. No field names are given, since the same field may be referred to in different programs and in different application modules by different names. However, since the location within the record is given in this table, this should cause no confusion. All locations of fields within each record are given relative to one, the first character position in the record.







<b>FILE DESCRIPTION</b>			SHEET 1 OF 1		
			REV.		
FILE NAME: ARINPT, SARINPT		FILE/ID NO:		DATE	
NO. RECS:		FILE TYPE: Sequential			
RECORD SIZE: 64		BLOCK SIZE:		DEVICE:	

**DATA ELEMENTS**

ALL  
  
IN  
CM  
DM  
AJ

NAME	NO. CHARS	BEG. POS.	END POS.	A/N/P	DP	DESCRIPTION	KEY
	2	1	2	A		Trans Code	
						{IN,CA,AJ,CM,DM}	
	6	3	8	N	0	Trans Date {MMDDYY}	
	6	9	14	N	0	Cust #	
	7	15	21	N	0	Inv # {CM#, DM#}	
	9	22	30	N	2	Gross Amount	
						{A/R AMT}	
	7	31	37	N	2	Tax Amt	
	7	38	44	N	2	Freight	
						0 = OUT OF STATE	
	1	45	45	X		Tax Code	
						B = CA non-taxable	
						C = CA taxable	
	7	46	52	N	2	SPECIAL CHARGES {IF	
						RECORD IS FROM 'OE'	
						SYSTEM}	
	11	53	63	A		UNUSED	
	1	64	64	N	0	Sort Key *	
CA	6	9	14	N	0	Cust #	
	7	15	21	N	0	Inv #	
	9	22	30	N	2	Payment Amount	
	9	31	39	N	2	Discount Amount	
	6	40	45	A		Cust Check #	
	10	46	55	A		ABA #	
	1	64	64	N	0	Sort Key 1 - IN	
						2 - CM	
						3 - DM	
						4 - CA	
A - ALPHANUMERIC		DP - NO. OF PLACES TO RIGHT OF DECIMAL POINT					
N - NUMERIC		KEY - PRIMARY, SECONDARY, ETC. BLANK FOR					
P - PACKED		MOST ELEMENTS		FILE ID: _____			









FILE DESCRIPTION				SHEET 1 OF 1	
FILE NAME: CARDS				FILE/ID NO:	
NO. RECS:				FILE TYPE: Indexed	
RECORD SIZE: 80				BLOCK SIZE:	
				DATE	
				DEVICE:	

DATA ELEMENTS

	NAME	NO. CHARS	BEG. POS.	END POS.	A/N/P	DP	DESCRIPTION	KEY
ALL		2	1	2	A		Rec. Code	
							{BH,CA,IN,CM,DM,AJ}	
BH		3	3	5	N	0	Batch #	
		2	6	7	A		TR Code	
		10	8	17	N	2	Transaction Total	
		10	18	27	N	2	Discount Total	
CA		6	3	8	N	0	Customer #	
		7	9	15	N	0	Invoice #	
		9	16	24	N	2	Cash Amount	
		8	25	32	N	2	Discount Allowed	
		6	33	38	N	0	Customer's Check #	
		10	39	48			ABA #	
IN		6	3	8	N	0	Customer #	
CM		7	9	15	N	0	Document # {Invoice #}	
DM		6	16	21	N	0	TR Date	
		9	22	30	N	2	Gross Amount	
							{A/R Amt}	
		7	31	37	N	2	Freight Amt	
		1	38	38	A		Tax Code	
							Ø - Calif. non-taxable	
							'C' - Calif. taxable	
							'0' - Out of state	
		7	39	45	N	2	Tax Amount	
		9	46	54	N	2	Net Amt.	
AJ		6	3	8	N	0	Cust. #	
		7	9	15	N	0	Invoice #	
		9	16	24	N	2	Adjustment Amount *	
ALL		3	74	76	N	0	Batch #	Primary
		4	77	80	N	0	Sequence #	Primary
							* {POS - increase receivable}	
							{NEB - decrease receivable}	

A - ALPHANUMERIC      DP - NO. OF PLACES TO RIGHT OF DECIMAL POINT  
 N - NUMERIC            KEY - PRIMARY, SECONDARY, ETC. BLANK FOR  
 P - PACKED             MOST ELEMENTS

FILE ID: \_\_\_\_\_







- AUDIT TRAIL** - This information is provided by Accounts Receivable to enable the user to follow or trace the effect of any given transaction; for example, in the event that the transaction had an undesired effect.
- BACKUP** - Duplicate information maintained to restore information that was lost, invalidated, or destroyed; for example, by a system failure. In the manufacturing and distribution system, backup takes the form of copied files.
- BATCH** - For control purposes, transactions are entered in groups called batches. Each batch is assigned a control or batch number by the operator. The procedure used to enter batches of transactions computes a total amount from the transactions in each batch, compares that total with a total entered by the operator, and issues an error message if there is a difference between the two totals.
- CARRIAGE RETURN** - The key on the CRT terminal keyboard that, when pressed, causes the data to be passed from the terminal to the system
- CASH CONTROL** - The accounts receivable module provides the user with the information he needs to trace, keep up-to-date on, and control the amount of capital tied up in receivables.
- CRT TERMINAL** - The device, consisting of cathode ray tube screen and a keyboard, used to provide interactive communication between the system and the operator. The system communicates with the operator by displaying messages on the CRT screen; the operator communicates with the system by entering data and commands through the terminal keyboard.
- CURSOR** - This marker on the CRT terminal screen indicates the position at which any character entered by the operator appears on the screen
- DATA ENTRY** - Entry of information into the system by an operator. In the case of the manufacturing and distribution system, data is entered through CRT terminals while communicating with interactive procedures.
- FILE** - A collection of data consisting of records, each of which usually has the same layout and information items
- FILE MAINTENANCE** - The addition of modification of data items in a file. Modules in the manufacturing and distribution system provide procedures that enable the operator to perform file maintenance through interactive communication using the CRT terminal.
- INQUIRY** - Also interactive inquiry. Used to obtain desired items of information and display them on the
- INTERACTIVE** - A mode of communication between the operator and the system in which each (the operator and the system) responds to the other's entries
- INTERFACE** - A point of communication between modules, programs, systems, etc. For example, shared files used in common by more than one module within the system provide the interface between modules within the system.
- LINE FEED** - The key on the CRT terminal keyboard that, when pressed, causes the system to bypass a CRT data entry for this field
- MENU** - A list of procedures available for execution by the operator. Under the operating system, the operator can request displays of different menus.
- MODULE** - A collection of programs, procedures, and files, and the reports, processing, and facilities they provide that are designed for a specific application area
- OUTSTANDING ACCOUNT** - An account that has an amount due to the user's company
- PROCEDURE** - The executable units for the operator. The operator chooses the procedure that does the task he needs done, then initiates that procedure from the CRT terminal.
- PROGRAM** - A precise sequence of coded instructions, written in a form acceptable to a computer, and necessary to solve a problem
- PROMPT** - A message displayed on the CRT terminal and used to indicate to the operator the next item of information to be entered
- RECORD (in a file)** - A collection of data items, treated as a unit. A set of such records may form a file (see FILE).
- RECOVERY** - Action taken to re-establish a former state of the system and the information in it after a disastrous system or user failure; for example, after the entry of a large volume of incorrect information by the operator or after a hardware failure
- RESTART** - The process of initiating the execution of a procedure again after that procedure has terminated without completing its task

**RUBOUT** - The key on the CRT terminal keyboard that, when pressed, causes the cursor to return to the beginning of the field if data has already been keyed into the field and causes the cursor to be moved to the beginning of the previous field if data has not been keyed into the field.

**UPDATE** - To update a file is to replace information items in that file with new information (also see **FILE MAINTENANCE**).

# INDEX

Accounts receivable summary 2-35  
Accounts receivable transaction edit listing 2-36  
ARCOR 2-27  
ARDETAGE 2-29  
AREDLIST 2-26  
ARFPURG 2-34  
ARHEAD 4-5, 6  
ARIND1 4-5, 7  
ARINPT 4-5, 8  
ARMAST 4-5, 9  
ARMFUPD 2-23  
ARMND 2-32  
ARMSTLST 2-24  
ARNEW 2-25  
ARSTMTS 2-31  
ARTRANS 4-5, 11  
ARSUMAGE 2-30  
ARUPD 2-28  
ARYND 2-33  
ARZERO 4-5, 12  
AR005 4-1  
AR007 4-1  
AR010 4-1  
AR021 4-1  
AR022 4-1  
AR025 4-3  
AR100 4-3  
AR110 4-3  
AR120 4-3  
AR130 4-4  
AR140 4-4  
AR160 4-4  
AR200 4-4  
AR220 4-4  
AR240 4-4  
AR250 4-4

CARDS 4-13  
CARRIAGE RETURN key 2-7  
Cash receipts journal 2-35  
Cross reference, file program 4-4, 5  
CRT terminal 2-7  
Customer listing 2-35

Daily processing 2-1  
Data entry 3-1  
Detailed accounts receivable aging report 2-36  
DUMMY 4-5, 14

Environment 1-1  
External reference 3-1

File 4-1, 16  
File description  
ARHEAD 4-5, 6  
ARIND1 4-5, 7  
ARINPT 4-5, 8  
ARMAST 4-5, 9  
ARTRANS 4-5, 11  
ARZERO 4-5, 12  
CARDS 4-5, 13  
DUMMY 4-5, 14

INTAB 4-5, 15  
NEWART 4-5, 9, 11  
NEWMAST 4-5, 9  
PRM005 4-5, 16  
SARINPT 4-5, 8  
File layout (see file description)

Inquiry 3-1  
INTAB 4-5, 15  
Internal reference 4-1  
ITOS 1-1  
Invoice register 2-35

Job step 2-22

LINE FEED key 2-8

Menu 2-6  
Month end summaries 2-36  
Monthly processing 2-1

Narratives (see program narratives)  
NEWART 4-5, 9, 11  
NEWMAST 4-5, 9

On request processing 2-3  
Operating instructions  
ARCOR 2-6  
ARMFUPD 2-6  
ARNEW 2-6  
menu and procedure selection 2-6  
system initiation 2-4  
Organization 1-1; 4-1

PRM005 4-5, 16  
Procedure (see operating instructions,  
run sheets)

Program narratives

AR005 4-1  
AR007 4-1  
AR010 4-1  
AR021 4-1  
AR022 4-1  
AR025 4-3  
AR100 4-3  
AR110 4-3  
AR120 4-3  
AR130 4-4  
AR140 4-4  
AR160 4-4  
AR200 4-4  
AR220 4-4  
AR240 4-4  
AR250 4-4

Recovery (see rerun)  
for ARCOR 2-27  
for ARFPURG 2-34

for ARMFUPD 2-23  
for ARMND 2-32  
for ARNEW 2-25  
for ARUPD 2-28  
for ARYND 2-33

**Reports**

accounts receivable summary 2-35  
accounts receivable transaction  
edit listing 2-36  
cash receipts journal 2-35  
customer listing 2-35  
detailed accounts receivable aging report 2-36  
invoice register 2-35  
month end summaries 2-36  
summary accounts receivable aging report 2-36  
year end sales data removal report 2-36

RUB OUT key 2-7

Run sheets 2-22

ARCOR 2-27  
ARDETAGE 2-29  
AREDLST 2-26  
ARFPURG 2-34  
ARMFUPD 2-23  
ARMND 2-32

ARMSTLST 2-24  
ARNEW 2-25  
ARSTMTS 2-31  
ARSUMAGE 2-30  
ARUPD 2-28  
ARYND 2-33

SARINPT 4-5, 8

Schedule 2-1

daily 2-1

monthly 2-1

on request 2-3

yearly 2-3

Statements 2-36

Structure

Summary accounts receivable aging report 2-36

User's guide 2-1

Year end sales data removal report 2-36

Yearly processing 2-3

COMMENT SHEET

MANUAL TITLE CDC® Accounts Receivable Version 1 Reference Manual

PUBLICATION NO. 96769130 REVISION A

FROM NAME: \_\_\_\_\_

BUSINESS  
ADDRESS: \_\_\_\_\_

COMMENTS: This form is not intended to be used as an order blank. Your evaluation of this manual will be welcomed by Control Data Corporation. Any errors, suggested additions or deletions, or general comments may be made below. Please include page number.

CUT ALONG LINE

STAPLE

STAPLE

FOLD

FIRST CLASS  
PERMIT NO. 333

LA JOLLA, CA.

**BUSINESS REPLY MAIL**

NO POSTAGE STAMP NECESSARY IF MAILED IN U.S.A.

POSTAGE WILL BE PAID BY

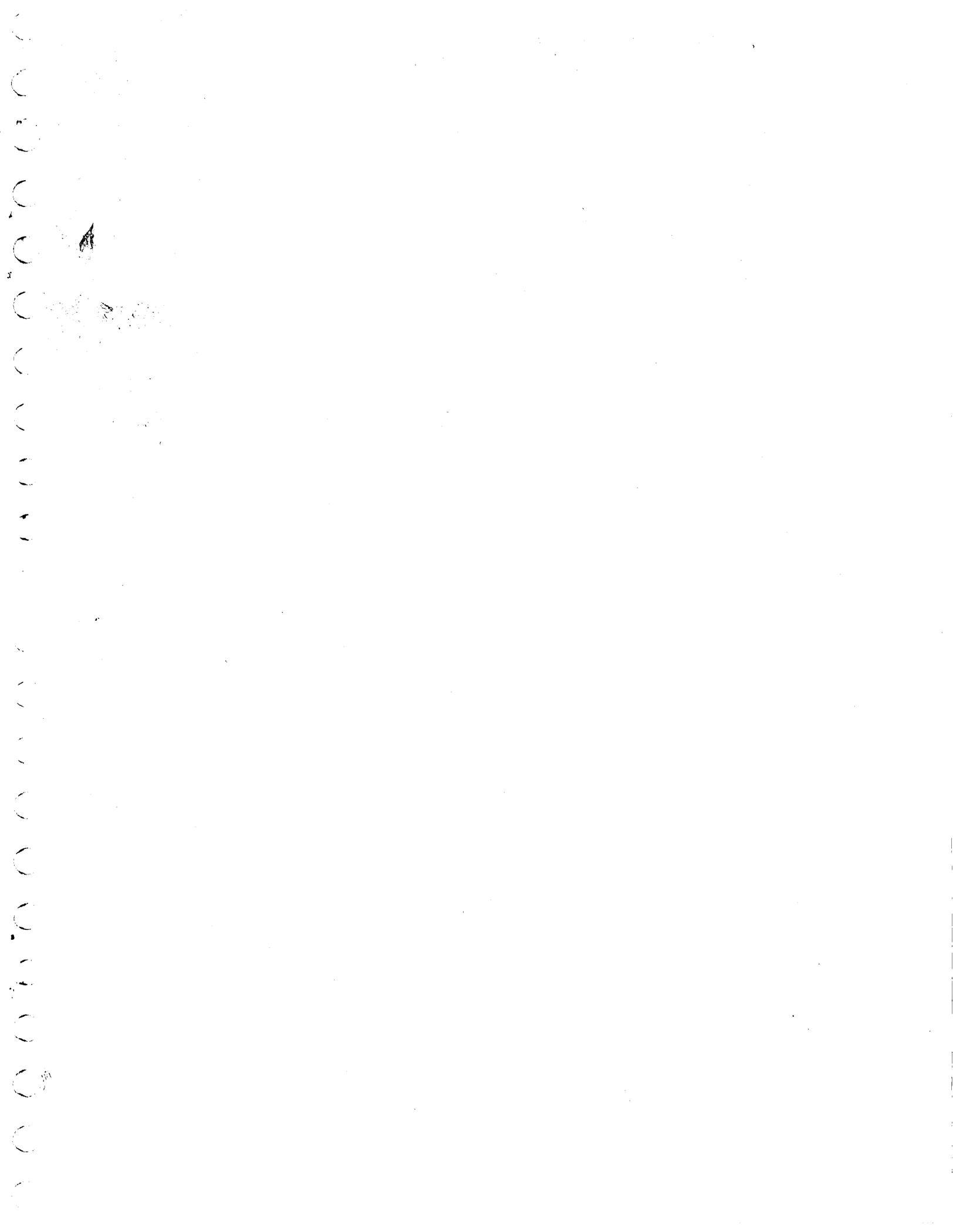
**CONTROL DATA CORPORATION  
PUBLICATIONS AND GRAPHICS DIVISION  
4455 EASTGATE MALL  
LA JOLLA, CALIFORNIA 92037**

CUT ALONG LINE

FOLD

STAPLE

STAPLE



CORPORATE HEADQUARTERS, P.O. BOX 0, MINNEAPOLIS, MINNESOTA 55440  
SALES OFFICES AND SERVICE CENTERS IN MAJOR CITIES THROUGHOUT THE WORLD

LITHO IN U.S.A.



CONTROL DATA CORPORATION