

*ACAS*  
*Applewood Computers Accounting System*

**Order Entry**

**Stand Alone System Only**

**Reference Manual**

**v1.5**

This document is the Reference Manual for Order Entry - or it will be when complete.  
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This and the accompanying documents relate to these Open Source packages.

Each sub system has its own documentation.

Applewood Computers  
17 Stag Green Avenue  
Hatfield  
Hertfordshire  
AL9 5EB  
United Kingdom

Lead Programmer Email: [vbcoen@gmail.com](mailto:vbcoen@gmail.com)

Support      Email:      [vbcoen@gmail.com](mailto:vbcoen@gmail.com)  
                 Website:      [www.sourceforge.net/p/acas](http://www.sourceforge.net/p/acas)

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**WARNING:** This product has been discontinued as all features are available within Sales Ledger.

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## Manual Introduction

This manual is under write and updating mode during migration to GnuCobol and development, as well as system testing for OE Release v1.5.

This manual like all of the ACAS manuals, may well have errors in grammar, detail or by absence or presence of information that does not match the software discussed.

Every endeavour is made to ensure accuracy, but manuals like software, can have bugs despite multiple readings of the same document. After a time, you end up with word blur so having others to read, helps.

If you find any faults, please report it along with any suggested changes, see inside front cover for email contact details. Please do not assume that others have done so.

For the interim, it should also be read in conjunction with the very original, pdf document System Reference Manual Order Entry / Billing release 1 dated January 1982 but note that this document is really the Order Entry System Specifications (used as the source for this document) as original coded for the RM Cobol compiler for use with Tandy TRS-80 systems running Xenix (a Unix type operating system), and then is being migrated to the GnuCobol compiler and has required many changes to fields in files - mostly larger, Screen displays, Data input and some of the reports that involves changes again to data field sizes mostly to increase their size, which has directly changed the screen and data input formats and layouts. Needless to say logic errors found while system testing, has required additional changes many of which, is in the original code.

This document is initially more a set of notes, not necessarily in any correct order but more to be considered as a system specifications for the OE system as now coded.

It must be noted that OE has support for stock items being out of stock however automatic re-invoicing for newly arrived stock, has not been detected - nope it is not there. Stock items are shown where there is a back order quantity and this is used to produce re-order reports and these can be used to place a order against the supplier of the items manually. This is no processing for dealing with new stock against any orders that had a back order status set in any way. Well none that I have found and this is a major failing and really requires addition code to support it.

The whole of BO (Back Order) provision is based around two reports, one for BO by item and the other BO by customer where the first is to order such stock if not already done so via the low stock reports and the customer one to keep track by customer of BO orders outstanding assuming the report is created daily etc. This report is then used to create a new order / invoice when stock comes in and yes you have to manually do this.

The programs and processes that handle this, do pass on data to the non existent AR (Accounts Receivables) or in ACAS speak Sales Ledger, so such data is not really of much use. Clearly the AR or SL system would need to have a method of passing on to the Purchase Ledger system a process to order such out of stock items from a supplier or at least a report to do so. There is NO provision to do this within OE.

Consideration then has to be made regarding the turn around time before such stock is delivered to the company in order to fill any outstanding orders and within a reasonable time frame. The system will need to be able, when new stock arrives to run a process that checks new arriving stock against back orders and then raise a invoice, packing note controlling the back ordered quantity against the newly arrived stock assuming that an order that has back order stock registered and has newly arrived is invoiced along with packing notes etc.

NOTE this is in ACAS via the SL invoicing process / program sl910.

Another issue is that if the order that has been placed on back order is a part order where other items may have been sent out or additional items also has been back ordered what is the process steps are to be followed depending on the requirements of both the company and the customer placing the order.

This assumes that when creating a new customer record that the BO flag is set to "Y" so that any processing can be done.

There are more variations of this that may have to be considered.

The view point for ACAS was to keep it a manual process for the Sales department to handle so that all possibilities are correctly handled (however, this has now been added in) via stock additions (st020), stock BO reporting (sl970) and Sales Invoicing (sl910).

ACAS does support recurring invoicing and that type of system can be adapted as an addition for a back order system up to a point, but may still not suit all system users.

I have now added new fields to ACAS (Applewood Computer Accounting System) customer record, Invoice record (header) to record when such BO items can be processed. The idea is for users only to have BO orders per customer on one or more invoices with no items that can be supplied now. This way normal invoice processes can continue but for an invoice with BO stock the whole invoice is marked as a BO one along with a ON-HOLD flag. When new stock comes in via the stock control system then that program can run a process IF added stock is added to zero stock records and then to check the ON-HOLD and BO flags on any such invoices that are used, to now create a fresh invoice in a by invoice number order, so first order in, gets their products etc. and such orders on a ON-HOLD and BO flagged invoice get copied over to the new invoice and then removed from the ON-HOLD one and when all BO items are gone the whole BO invoice is deleted.

The idea is to minimise the number of extra programs or code required to do this - I hope as it all has to be: tested and documented. In any event ACAS has needed a new program (sl970) to report BO items by stock items and by customer so that such can be high lighted - done.

Note from the above comments that any invoice with BO items present is issued with the BO items recorded elsewhere which in turn is processed by the stock additions program and there after by the Sales invoice program.

Again OE does not handle the auto invoicing of fresh stock against a back order as far as I can see so far within all the programs that can do such a process.

Yes I may well have said the same more than once but it is an important consideration whether to use OE as is.

It is better to use the ACAS invoicing system within sales ledger with the needed new changes. At least that does fully support payments, and statement production.

As indicated above I have not looked in detail of what OE does do, but there is no re-invoicing process present.

So this may well require more programs to be written to cover this. ACAS now, has the Back Order functionality fully implemented. although most users of ACAS may prefer to do these processes manually via the sales department as liaison between them and customers can be more easily maintained but it is fully installed within ACAS v3.02.

Following is a list of OE files and their usage by program.

I will then start adding notes regarding process flows and go in a bit as to the processes themselves based on the OE menu options.

As stated above, the BO function has been fully implemented within ACAS as of v3.02 so there is no OE functions that is not already present in ACAS and therefore usage of OE is not needed but available here for any user / Cobol student who wishes to play with it. In which case good luck.

**UPDATE : This OE system has been discontinued as not required for inclusion into ACAS as all usable features are already present.**

**This document and any sources for it are for information and Cobol training type purposes only.**

## System Notes

Note that some files would be discontinued if OE was moved to ACAS as the system will be using the ACAS files.

## File Usage Maps

Migrate to ACAS ?	Y	Y	Y	Y	N?	N	Y	N?	Y	Y	Y	Y	?	?	?	?
	C	A	A	A	A	A	O	O	O	O	O	O	O	O	O	O
	O	C	R	R	R	R	E	E	E	E	E	E	E	E	E	E
	M	C	C	C	C	S	C	C	I	R	O	L	B	B	B	B
	P	T	T	U	D	L	T	D	T	E	R	I	O	O	O	O
	F	F	L	S	S	M	L	S	M	C	D	N	I	I	C	C
	I	I	F	F	F	F	F	F	F	T	H	I	S	F	S	F
	L	L	I	I	I	I	I	I	I	R	D	T	E	I	E	I
	E	E	L	L	L	L	L	L	L	X	R	M	L	L	L	L

## Programs

Order Processing:

OEOPMENU							R		R		R					
OEEOADD				R	R	R	*				*		*			
OEITMADD							R	R	*			*				
OEEOECNG					R	R	R	.			*		*			
OEITMCNG							R	R	*			*				
OEEOEDEL					R	R	R		*		*	*				
OEEOEMISC		R	R		R											
OEORDED T					R		R				R	R				

Print Packing / Picking Notes:

OEPIKTIK							R									
----------	--	--	--	--	--	--	---	--	--	--	--	--	--	--	--	--

Order Enquiry:

OEORDINQ				R	R						R	R				
----------	--	--	--	---	---	--	--	--	--	--	---	---	--	--	--	--

Billing & Invoiced Printing:

OEBLMENU																
OEBLOSEL					R	R	R				*	*				
OEBLOUNS					R		R				*	*				
OEBLLSEL							R	R	*		*	*				
OEBLMISC		R	R						*		*	R				
OEMNTINV	R		R								*	R				
OEINVOIC			R?		R		*				*	R				
#ARSLSJNL						*?										
#ARSLSPST						*?										
OEPSTINV							*		*		*	*				

Print Back Orders by item:

OEBOITEM									R		R	R	*	*		
----------	--	--	--	--	--	--	--	--	---	--	---	---	---	---	--	--

Print Back Orders by Customer:

OEBOCUST				R							R	R		*	*	
----------	--	--	--	---	--	--	--	--	--	--	---	---	--	---	---	--

Notes: R = File is read.

\* = File is updated.



## File Usage Map

C	A	A	A	A	A	O	O	O	O	O	O	O	O	O	O	O
O	C	R	R	R	R	E	E	E	E	E	E	E	E	E	E	E
M	C	C	C	C	S	C	C	I	R	O	L	B	B	B	B	B
P	T	T	U	D	L	T	D	T	E	R	I	O	O	O	O	O
F	F	L	S	S	M	L	S	M	C	D	N	I	I	C	C	C
I	I	F	F	F	F	F	F	F	T	H	I	S	F	S	F	F
L	L	I	I	I	I	I	I	I	R	D	T	E	I	E	I	I
E	E	L	L	L	L	L	L	L	X	R	M	L	L	L	L	L

### Programs

O/E Control File Maintenance:  
OECLMNT

\*

All Files set up Creation:

SLCUMNT	R			*												
OE-SETUP	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*

O/E Menu:

OE R

O/E Price Code Maintenance:

OEPCDMNT									*							
OEPCDLST									R							

Commission Code Maintenance:

OECOMMNT									*							
OECOMLST									R							

Item File Maintenance:

OEITMMNT				R		R			R							
OENUMITM						R			R							
OEALPITM						R			R							

Print Price List:

OEPRCLST									R							
----------	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--

Print Purchasing Advice:

OEPRADV						R			*							
---------	--	--	--	--	--	---	--	--	---	--	--	--	--	--	--	--

Print Stock Status Report:

OESTKSTA						R			R							
----------	--	--	--	--	--	---	--	--	---	--	--	--	--	--	--	--

Period Closing:

OEPCLOSE									*							
----------	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--

Year End Closing:

OEYCLOSE									*							
----------	--	--	--	--	--	--	--	--	---	--	--	--	--	--	--	--

Item Receiving Processing:

OERECENT									R	*						
OERECREG									*	*						

Notes: R = File is read.  
\* = File is updated.  
W = Written to.

# Introduction

This document describes the types of files associated with the O/E System and their uses.

COBOL source files. These include source code for all programs in the system and copy library files, which consist of COBOL source code which can be included more than one program by the use of the COPY verb.

COBOL object files. These are the machine executable programs which constituent the working O/E System and are created by use of the GnuCobol compiler.

Cobol Source Files: Program Source Files: Stored in folder src.

Cobol copy books stored in folder src/copybook.

Program source file names have the following format:

oe(progname).cbl

where:

"oe" is the system designator, all O/E System program names start with these two letters.

"progname" is up to eight characters which uniquely identify a specific program and file.

NOTE: The Company File Maintenance and Valid G/L File Maintenance programs are not unique to the O/E System and thus do not carry the "OE" system designator, for example :  
slcustmnt - Customer file maintenance written by myself but code taken from ACAS,  
slcdsmnt - Code file maintenance. again written by myself with code taken from ACAS.  
C code routine accept\_numeric - Supports the input of numeric data after code migration.

Generally, OE program names are a concatenation of abbreviations for the words that constitute a functional description of what the module does. For example, The "O/E Item File Maintenance" program is named:  
OEITMMNT.CBL.

Note that the actual programs name used from the source code and executables are all lower case characters but the program names used on screen and reports is upper case in order to highlight them.

The same applies to **all** data files in that file names plus file extension are shown in this document as upper case but are all lower case in usage. i.e., .  
ACCTFILE.DAT is actually acctfile.dat

All data files have the extension of .dat and some have additional files with extensions of dat.1 to signify they use an alternative index such as the customer or stock item name.

The above assumes user has used the BDB ISAM library but if another is used then additional extensions may well be also used. See the GnuCobol compiler manual for more information.

All program sources have an area near the start named Changelog. that shows all changes made during migration and testing for each program. This is to help the programmer but can be useful to a user for reference purposes - there again, may be not.

During migration over from RM Cobol to the Free to obtain and use GnuCobol compiler, the sources have been converted to use instead of Cobol standard fixed format 80 column to variable format of up to 250 characters per line. This standard, dates back to 1959/60 when programs were on 80 column punched cards.

This change is to make the sources easier to read and understand and is prior to converting all sources including the copy books to free format, which remove the first six characters from a line of source code, but this will only occur if OE is also migrated over to use within the ACAS accounting system and that will not, now happen.

It must be pointed out that the ACAS sub system Sales Ledger has a invoicing system as well as processes that deal with invoice payments and production of customer statements and late letters should the need arise, and these can be sent via email providing each customer has their email address details on the record at point of data entry or is amended to have along with the Back Order functions with BO also added into Invoicing to pick up any BO transactions that now have had stock replenishments.

These features are not within OE, yes OE does not support any payment elements nor produces statements but does produce invoices and packing / picking lists.

Again all such functions are within the ACAS package.

## **OE Menu**

### **Overview of menu options**

- A) Customer Maintenance
  - B) Order Processing
  - C) Print Packing Tickets
  - D) Billing and Invoice Printing
  - E) Order Inquiry
  - F) Item File Maintenance
  - G) Item Inward Processing
  - H) Print Price List
  - I) Print Purchasing Advice
  - J) Print Item Stock Status Report
  - K) Print Back Orders by Item
  - L) Print Back Orders by Customer
  - M) O/E Control File Maintenance
  - N) Pricing Code File Maintenance
  - O) Commission Code File Maintenance
  - P) Period End Closing
  - Q) Year End Closing
  - R) OE File Set Up
  - S) Salesman & AR Code Maintenance
- 
- X) Exit To O/S (where O/S = Linux, Windows, MVS, OSX etc.)

## OE General Process Flows

1. To start, first thing to run is option R - OE file set up

This must be run to create all primary data files and a basic set of key records such as Company file data - Name, Address, phone number, cups printer spool names for two printers and a few other important fields to ensure the smooth running of the OE system, next is the OE control file and the AR control file to record G/L account numbers for various accounts used by the system and if you have ACAS running use those if not leave as zeros. Next is data for Codes, price discounts, salesman initials and name. If you will not be using commission code remember to set these flags to spaces, in any event although OE creates A/R and other files they will not get processed any where so no point really, so just leave salesman flag set as space, there is another one or two of a similar nature to leave blank as well.

The program will then create all remaining required files that do not yet exist without any data present.

Note that there is also menu options M, N and O for doing some of these so you could leave these as basic as needed and then go into these options to finish it off, as needed.

2. Customer file maintenance including creating or amending, etc., new customer records and yes you have to do this process here before creating invoices and orders.

3. Item File Maintenance to create your stock inventory where the quantity held is taken from your stock holdings and you should also record the location say by room, shelf, location on a shelf, etc. If you have it also include retail price, cost price etc., (there are other fields that should be included if you have the information to hand. This also applies to ACAS Stock Control.

What is important that for a production system, the quantity on hand is correct and in any event a print out of all items should be produced on a regular basis such as weekly to verify against actual stock in the stock room or warehouse.

4. Order Processing - run daily if you get fresh orders in.

As indicated, you need to create a new order for each one you receive against a already created customer record. so you will need a printout of all customers and stock items.

Here if running say under Linux you could have another terminal open that is only used to input new customer records before switching back to your primary terminal session to create orders.

I have not tried this but should work.

When you get to a part of the day when you wish to start fulfilling the orders entered, i.e., packing their ordered items you will need to release the invoice/order using option B.

Then go in to option C      Print Packing Tickets to print out the packing Notes.

Followed on by option D    Billing and Invoice Printing and here you will be printing the invoices on plain paper (if you have set Print Company details to "Y" in the OE control file.

If not the program will assume you are using preprinted paper and in any event using ink jet, ink tank or laser printers. If not, you will have to possibly make changes to these print programs to deal with printing using a matrix type printer using continuous stationary.

This is not set up as users with such printers are now very rare.

Note that ACAS supports setting email addresses by customer for invoices, statements etc, where the system will send out an email instead of printing them subject to some modifications such as using suitable software to do the sending etc., as this varies depending on the operating system in use..

All the other options not yet discussed, are used as the need arises including the end of period and end of year processing that clear down the period totals and the yearly totals.

Now follows a process by process detailed summary that goes into a lot more depth.

## **Program Summary by Process**

### **Order Entry Menu**

Input:           COMPFILE  
Updated:       None  
Output:         None

### **OE**

This is the Order Entry Menu. It calls each primary program whose names are passed to it. Each program that OE calls, also returns back to it, when completed.

This program initialises the following system wide parameters and common linkage elements :

1. Display Company Name - Obtained from the Company File.
2. Report Company Name - Obtained from the Company File.
3. Profit Centre Usage Flag - Obtained from the Company File.
4. System Date - Obtained by System Call.
5. Others as required and that includes ACAS system data.

Note that item 5. the ACAS system data was on the basis that OE would be integrated into ACAS and this was cancelled so this element could be removed from OE but would require additional coding to deal with the now missing data fields. This is the reason I have left it in.

## Order Processing

Order Processing: Add, Change, Delete, List.

Input Files:

OEITMFIL  
OECTLFIL  
OEORDHDR  
OELINITM  
OECDSFIL  
ACCTFILE  
ARCTLFIL  
ARCDSFIL  
ARCUSFIL

Files Updated:

OEITMFIL  
OECTLFIL  
OEORDHDR  
OELINITM

Output Files:

Order Edit List

Programs in Module: OEOPMENU, OEOEADD, OEITMADD, OEOECNG, OEITMCNG, OEOEMISC,  
OEOEDEL, OEORDED

### **OEOPMENU**

This program displays the main Order Processing Menu and calls the appropriate program.

### **OEOEADD**

This program displays the first screen in adding orders and allows entry of the main order information which is recorded in the Order Header File.

Data Entry Defaults, validity Checks and Special instructions:

Field 0: Order Number: Default is either the last order number entered plus one; or, the last Order Number from the O/E Control File plus one. Validate that the Order Number is not on file.

Field 1: Order Date: Default to System Date as an 8 digit field stored as CCYYMMDD regardless of country of use. All data capture, display and reports are shown in the selected format via the Company Data file.



Field 2: Order Type: Display Sub-Menu defining order types "O", "I" and "C" which is respectively, Order, Invoice or Credit Note / Memo, and accept entry.

Defaults to "O" on first order entered, or the last type entered for subsequent orders.

Field 3: Customer Number: Validate against the A/R (SL) Customer File and displays either Customer Name and Address, if found; or an error message if not found.

[ *This record must have been created first using OE menu option A.* [ SL = ACAS Sales Ledger ]

If the F1 Key was pressed in this field, accept entry of up to thirty characters of Customer Name and search the Customer File sequentially by Alternate Key.

Display each Customer Name and Address read and ask "Right Customer?" until the user responds "Y" or there is a break in the Alternate Key.

Field 4 - 10 Customers name and address details as six lines plus Post code or Zip.

Field 11 - 17 Ship To: Default to customer's billing address.

Field 18: Salesman: Default to Salesman field in customer record. Validate against Salesman File.

Field 19 Customer PO (Purchase Order) number / reference.

Field 20: Ship Via: Defaults to value in customer record. Validate against A/R Codes File.

Field 21: Ship Date: Defaults to "N/A" for Credit Memos/Notes or "ASAP" for Orders and Invoices

Field 22: Terms Code: Default to customer record value. Validate against A/R Codes File.

Field 23: Tax Percent:age Defaults to percent specified on the customer record Terms Code. On F1 Key, accept entry of a percentage figure.

Field 24: Discount Percentage Defaults to value specified in the customer record. On F1 Key, accept entry or a value.

Field 25: Profit Centre : Only displays If the A/R Control File specifies that profit centres are used. Defaults to Profit Centre previously entered; or, on F1 Key, accept new entry.

After all fields have been entered the program asks "Field Number to Change? " and then processes any changes. Then the Order Header record is written after all the fields have been entered and any changes have been made. The Selection Code for the order is set as "incomplete".

This program then calls OEITMADD to enter the individual line Items for the order.

After the Items have been added, if the order is a credit memo or invoice the program calls OEOEMISC to complete the billing information.

[ *This has been changed for all order types to be processed.* ]

The Order Header record is rewritten after all entries have been made.

For Credit Memos/Notes and Invoices the Selection Code is set as "selected"; for regular orders, It is set as "complete" and may be selected for billing in the Billing and Invoice Printing module.

## **OEITMADD**

This program allows entry of the individual items for the order and updates the Quantity committed field in the Stock / Inventory Item File if Inventory Control is specified.

Valid Item numbers are entered. If the Item number is a miscellaneous Item, entry of the description is required, otherwise, the description is displayed from the Stock / Inventory Item File.

If the F1 key is pressed for the Item number, the user is allowed to enter the Item description (or part thereof). The program searches and displays all Items matching that description using the Alternate Key in the Inventory Item File. If the right one is not found, another Item number is entered.

After the Quantity ordered field is entered, for regular orders and invoices, a check- is made to see If there is inventory control and whether the Item is back-orderable or not.

If there is no inventory control for the system (or none for the Item), the Quantity ordered becomes the Quantity to ship. There is no updating of Inventory done in the Inventory File.

If there is inventory control and the Quantity available (Quantity on hand - Quantity committed in the Inventory File) is less than the Quantity ordered, the Quantity available is displayed and the user is allowed to select one of the options.

For a non back-orderable Item, the options are to cancel the Item, order what's in stock or override. After the selection has been made, if the Item was not cancelled, the inventory Item quantity committed is updated by adding to It the amount to be shipped and rewriting the record.

For a back-orderable Item, the options are to cancel the Item, back order the balance, back order the full Item Quantity, or override the inventory.

After the selection has been made, If the Item was not cancelled, the inventory Item Quantity committed field is updated by adding to It the Quantity ordered and rewriting the inventory Item record.

The remaining fields for the Item are entered. If the order is a credit note / memo, entry of Quantity to be returned to inventory is allowed. If the Item is a miscellaneous Item, entry of the unit cost is allowed.

The unit price is calculated using the price code associated with the inventory Item. The O/E Codes File is read and the price is calculated taking into account any discount on the price as set up in the O/E Codes File.

After the Item is entered, changes are allowed by way or the "Any Change" question. The user is allowed to re-enter, If s/he wishes, any field previously entered by the cursor being displayed at the end of the field and allowing the Restart Key to be pressed to enter a new amount.

The total cost for the Item is calculated and added on to the totals in the Order Header record. The commission amount is calculated, based on the Commission Code for the Item, and added to the Order Commission amount but only if the commissions flag is set in the OE Control file.

The Items entered are displayed by scrolling down the screen in the order that they are entered. This is done by setting up a screen table and storing the data as If is entered into the table elements. The lines of the table are moved down, and the table is displayed.

## **OEOEMISC**

This program is called from OEOEADD and OEOECNG after the Items have been added and/or changed for all credit memos and invoices. This module completes the Order Header information. See related screen layout and file definition.

After the miscellaneous charges amount is entered, If the amount was not zero, the A/R Control File is checked to see If multiple accounts exist for miscellaneous charges. If they do, a valid account is entered,

The sales tax is calculated using the customer's tax percent and the order taxable amount. The tax is displayed and may be overridden by pressing the Restart key and entering a new amount.

The freight amount is entered. If the amount entered was not zero and multiple account exist for freight charges in the A/R Control File, a valid account is entered.

If the Commission Amount calculated and accumulated for all Items on the order is zero, the Commission Percent is entered and the commission amount is calculated and displayed.

If the accumulated commission amount is not zero, then the percent is not entered, and the commission amount is displayed.

Any subsequent entry of the commission percent will result in a recalculation of the commission amount based on the entered percent.

After the fields have been entered, the record is passed back to OEOEADD and the Order Header record is rewritten.

## **OEOECNG**

This program allows changes to the main order information or any order that has not been invoiced (as long as the order is flagged as "complete" and has not been selected for billing). The order number is entered and the contents of the Order Header record are displayed.

Changes are made and the Order Header record is rewritten. The program then calls OEITMCNG to make any changes to the individual new Items.

If the order is a credit memo or invoice, the Order Header record is passed to OEOEMISC for any changes in the billing information. [ *Now done for all Order types.* ]

After all changes have been made, the Order Header record is rewritten.

## **OEITMCNG**

This program allows changes to the line Items of an order and updates the inventory Quantity committed accordingly.

A valid Item number is entered. If the Item is not on the order a message is displayed and the Item may be added to the order If the user wishes.

If the F1 key is pressed, the program will bring up the next Item on file for the order.

The fields are displayed and any needed changes are entered. If the user changes the Quantity Ordered, entry of the Quantity To Ship field is required. The Quantity available is displayed at the bottom of the screen. If the Quantity to ship entered is less than the Quantity ordered, then the remaining amount is designated as either out of stock or back ordered. The Inventory Item record is updated taking into account the Quantity to ship and Quantity back ordered (if any).

The END key pressed for the Item number will terminate this portion of Order Entry.

## **OEOEDEL**

This program deletes selected orders and updates the Inventory File as needed.

A valid order number is entered. The order fields are displayed. If the user wishes to delete the order, he answers "Y" to the question "Okay to Delete Order?". The Order Header record is deleted.

The corresponding Line Items for the order are then read. If there is Inventory Control in the system and the Item has inventory control, the Inventory record is updated. If the Item is back-orderable, the Line Item Quantity ordered is subtracted from the Inventory Quantity

Committed. If the Item is non back-orderable, the Line Item Quantity to ship is subtracted from the Inventory Quantity Committed. The Inventory record is then rewritten.

The Line Items for the order are deleted.

## **OEORDED T**

A screen is displayed to ask what the starting and ending range should be.

After the user enters the screen data, the order header information and corresponding line items are printed per the report format. If "ALL" orders were selected, control returns to the Order Processing Menu, otherwise, the screen is re-displayed and a new starting and ending range is obtained. Control returns to the Order Processing Menu after "ALL" orders are selected or after the END key has been pressed.

## **Print Picking Tickets / Packing Notes**

Print picking tickets for all orders and invoices on file.

Input: OEORDHDR, OELINITM  
Updated: None  
Output: Packing Notes / Picking Tickets

Programs in Module: OEPIKTIK

### **OEPIKTIK**

This is a program to allow the user to print picking tickets / packing notes for all or selected order and invoices on file.

Display the screen and allow entry of the starting and ending order numbers. If the RETURN key is pressed for the starting number, It defaults to "ALL".

Read the Order Header File sequentially. For each Order Header Record, read the line Items sequentially for that order using the line sequentially Picking Sequence key. Reading the Line Item File with the alternate key will automatically put the line Items in picking sequence order. Print each picking ticket per the report layout.

If the user selected a specific range to print, allow entry of other ranges. If the user selected "ALL", return to OE after printing.

## Billing and invoice printing

Select, Un-select orders, Print edit list, Print invoices and post to A/R (S/L).

Input: OEORDHDR

OELINITM

OEITMFIL

COMPFILE

ACCTFILE

ARCTLFIL

OECTLFIL

OECDSFIL

ARCDSFIL

Updated: OEORDHDR

OELINITM

OEITMFIL

OECTLFIL

Output: Billing Edit List Invoices

Programs in Module:

OEBLMENU, OEBLOSEL, OEBLLSEL, OEBLMISC, OEBLOUNS, OEORDEDT, OEMNTINV, OEINVOIC, OEPSTINV

### OEBLMENU

This program is the menu for billing. The billing menu is displayed and an entry accepted. Then the appropriate program is called.

It calls the programs OEBLOSEL, OEBLOUNS, and OEMNTINV respectively to select orders, unselect orders, and print invoices. If Print billing Edit List is selected, the Passing Flag is set to "B" and OEORDEDT is called to print the report.

### OEBLOSEL

This program allows selection of orders. If is called by OEBLMENU and calls OEBLLSEL and OEBLMISC respectively to select line items and process order totals.

The order selection screen is displayed and an order number entered. If the F1 key is pressed, the first, or next unselected order on file is found and displayed. If the end of the file is reached, an error message is displayed and the file starts over from the beginning.



If an order number is entered the record is read and displayed. If the order is not found or incomplete or is an invoice or credit memo an error message is displayed and a new order number accepted.

When a valid order has been found, changes are allowed to it. Then the Line Item billing menu is displayed. This menu allows three selections:

1. BILL ALL Items
2. BILL Selected Items
3. BILL ALL Items Except X

If number 1 is selected:

- 1) All line Items on file for the order are read, their selection codes are set to "selected" (S), and the records are rewritten.
- 2) The total order amount, total taxable amount, and total cost are recalculated by reading through the line Items.
- 3) OEBLMISC is called.
- 4) The order selection code is set to "selected" (S).
- 5) The Order Header Record is rewritten.

If number 2 is selected:

- 1) If the order is already selected all of the li new Items for the order are set to "unselected" (space).
- 2) OEBLLSEL is called.
- 3) The total order amount, total taxable amount, and total cost are recalculated figuring in only those Items which have been selected in OEBLLSEL.
- 4) OEBLMISC is called.
- 5) The order selection code is set to "selected" (S).
- 6) The Order Header Record is rewritten.

If number 3 is selected:

- 1) All line items for the order are set to "selected" (S).
- 2) OEBLLSEL is called.
- 3) The total order amount, total taxable amount, and total cost are recalculated figuring in only those Items which are flagged as "selected" (S).
- 4) OEBLMISC is called.
- 5) The order selection code is set to "selected" (S).
- 6) The Order Header Record is rewritten.

The recalculation of order header fields as mentioned in 1, 2 and 3 above is done on the total taxable amount, total sale amount, total cost, tax amount and commission amount.

The commission is calculated for each line Item according to the commission code specified.

The above is repeated until the END key (Tab) is pressed.

## **OEBLLSEL**

This program allows selection of particular Items on an order. The line selection screen is displayed and an inventory Item number is entered.

If the F1 key is pressed, the first or next line Item on file for that order is found and displayed. If there are no more line Items for the order, an error message is displayed and the file starts over at the first line Item of the order.

If an inventory Item number is entered the first line Item for the order with that Item number is found and displayed (there may be more than one line Item with the same Item number). The question "Right Item?" is displayed and if it is not the right Item, the next line Item for the order with the same Item number is found and displayed and so on until the right Item is found or there are no more Items on file for the order. If there are no more line Items on file for the order and the right Item has not been found, the message "Line Item Not on File" is displayed and a new inventory Item number is accepted.

Once the correct Item is found the question "Bill this Item?" is asked. If the answer is "No" the Item selection code is set to "unselected" (space) and the record is rewritten. If the answer is "yes" changes are allowed, the Item selection code is set to "selected" (S) and the record is rewritten.

If the Item is not back-orderable and the Quantity to ship is changed, the Quantity committed field in the Inventory File is changed to reflect this.

If the unit price is changed a test is made to see which commission percent now applies. If the new price entered is the same as price 1, 2 or 3 of the Inventory Item file the commission percentage associated with this price in the Commission Code File is used (this commission percent is moved to the commission percent field in the Line Item File). If none of these prices match the new price entered, the price override commission percent is used.

The above is repeated until the END key is pressed.

## **OEBLMISC**

This program allows entry of the miscellaneous charges, freight amount, tax amount etc. The third order screen is displayed and fields entered. The END key is not allowed and the Restart Key just clears the screen and allows re-entry of all of the fields. After all fields have been entered changes are allowed.

For the freight amount and the miscellaneous charges amount an account number is also entered If A) The amount is not zero and B) If the A/R Control File indicates that freight or miscellaneous charges amounts are distributed.

The sales tax is computed on the total taxable amount and the tax percent for the order.

The order total amount is calculated and displayed right after the freight amount is entered and is the total of the order net amount, the

miscellaneous charges, the tax amount and the freight amount. If any of these amounts are changed, the total order amount is recalculated and redisplayed.

If the total commission amount for the order is not zero, If is not manually entered but is displayed and can be changed through the Item number to change logic. If a commission percentage is entered the commission is calculated based on this percentage and the total sale amount. This wipes out the previously calculated commission amount.

## **OEBLOUNS**

This program allows un-selection of selected orders. The order un-selection screen is displayed and an order number is entered.

If the F1 key is pressed, the first, or next selected order on file is found and displayed. If the end of the file is reached, a message is displayed and the file starts over from the beginning.

If an order number is entered, the record is read and displayed. If the record is not on file or incomplete or if If is an invoice or credit memo, an error message is displayed and a new order number is entered.

When a valid order has been found, the question "Cancel selection of this order?" is asked. If the answer is "yes" the line Items for the order must all be unselected. Then the order selection code in the order Header record is set to unselected and rewritten.

The above is repeated until the END key is pressed.

## **OEORDEDT**

See Order Processing.

## **OEMNTINV**

## **OEINVOIC**

This program prints invoices for all selected orders and credit memos. After printing the invoices if the printing is "OK", sales transaction records are created, and the Inventory and Order file are updated appropriately.

The order range to be printed is then entered.

The Order Header File is started at the starting order number. Before printing the invoice, the program checks to ensure the order has been selected. The line Items are read for that order. The invoice is printed using the Order Header Record and the selected line Items for that order.

After printing the invoice, the Order Header Record is rewritten, setting the Order Selection Code to Order Invoiced but not OK.

After the selected invoices have been printed, the question "Are invoices just printed OK ?" is asked. If they are not OK., the selected orders are rewritten setting the Order Selection Code to Order Selected. If they are okay, the orders are rewritten with the selection code of Order Invoiced.

The order range screen is redisplayed and new range or orders is entered and processing proceeds as above.

If the END key was pressed for the order range, OEPSTINV is called to post invoices.

## **OEPSTINV**

This program reads the Order Header File and Order Line Item File and writes A/R Sales Transaction File and A/R Sales Distribution Transaction File records for subsequent posting to A/R master file.

A sales transaction is written out for each invoice flagged as Order Invoiced.

If multiple distribution accounts exist for sales, freight, or miscellaneous charges, a sales distribution transaction record is written for each amount using the miscellaneous charges and freight accounts entered in order selection, and the sales account specified in the Inventory Item file for each line Item. The profit centre entered at order entry time is used as the last three digits of the account number.

Each selected line Item record is read and the inventory Item file is updated. The Quantity to Ship is subtracted from the Quantity on hand.

If there is Inventory Control, the Quantity to Ship is subtracted from the Quantity Committed. The Period-to-date and Year-to-date fields are updated using the Quantity Shipped, Line Item Unit Price and Discount fields.

Each line Item is checked to see if there is a Quantity Back Ordered. If there is, the Quantity Back Ordered is moved to the Quantity Ordered, the Quantity to Ship is set to zero, the Item is unselected and the record is rewritten. Otherwise, the Line Item Record is deleted.

After the above is done for each order, the order is checked to see if it has any line items remaining. If it does not, the Order Header Record is deleted. Otherwise, the order amounts are set to zero, the order is unselected and the Order Header Record is rewritten. If the order was an invoice order, it is changed to a regular order and the Order Header Record is rewritten for future selection or the remaining back-ordered items.

After posting is complete the program returns to the billing menu.

## **Order Inquiry**

Display a specified order on the screen screen.

Input: OEORDHDR  
OELINITM  
ARCUSFIL  
ARCDSFIL

Updated: None

Output: None

### **OEORDINQ**

When Done Return To: OE

This program displays all pertinent data regarding an order on the screen. The user selects an order by entering either Customer Number or F1 Key and Customer Name; and either an Order Number or a sequential search of orders for that customer.

Accept entry of either a valid Customer Number or the F1 Key in the Customer Number field. If a number was entered, validate it against the Customer File. If the F1 Key was pressed, accept entry of up to twenty five characters of customer name. Read the Customer File by Alternate Key using the Customer Name entered, display each Customer Name read and ask "Right customer?" until either the user answers "Y" or there is a break in Customer Name.

Accept entry of an Order Number and, If a number was entered, validate it against the Order Header File. If a number was not entered, read the Order Header File sequentially displaying each order for the entered customer and asking "Right order?" until either the user answers "Y" or there is a Customer Number break.

Once the correct order has been found, read and display the associated line items from the Order Line Item File. The F1 Key controls paging through line items. The F2 Key causes order totals to be displayed.

The Restart Key aborts display of this order.

## **Stock Item file Maintenance**

Add, Change, Delete, and prints out Items in the Inventory File.

Input: OEITMFIL, OECDSFIL

Updated: OEITMFIL

Output: Item File print out Alphabetical Item List

Programs in Module: OEITMMNT, OENUMITM, OEALPITM

### **OETMMNT**

This is a standard maintenance module which allows entry and editing of the Inventory Item File.

If the key entered is numeric, right justify If, padded with leading zeros, and redisplay.

Validate the Price Code and Commission Code entered against the O/E Codes File.

Display the code description If found. If not found, display an error message and force re-entry of the code.

### **OENUMITM**

This program prints the Inventory Item File within selected ranges.

A screen is displayed to ask for the range or Inventory Items to be printed on the report.

After the user enters the screen data, the Inventory Item File is read within the selected range. Each Inventory Item's data is printed per the report layout. If "ALL" Items were selected by the user, the program returns to OETMMNT; otherwise, additional item ranges are obtained and the program prints a report for each new range. The program returns to OETMMNT after "ALL" Items have been selected or after the user has pressed the END key at the range screen.

### **OEALPITM**

This module prints the Inventory Item File in alphabetical order by Item Description within selected range.

The Inventory Item File is read in order by Its alternate key or Item Description printing each Inventory Item's data according to the report layout. The program returns to OETMMNT upon completion of the print out.

## Item Receivings Processing - Also called Stock Inwards Processing

Item Receiving Processing: Add, Change, Delete, List and Post.  
Or Stock Items Inward Processing etc.

Input: OERECTR

Updated: OERECTR  
OEITMFI

Output: Receivings Edit List  
Receivings Register Reports.

Programs in Module: OERECENT, OERECREG

### OERECENT

When Done Return To: OE

This is a Standard Transaction module which allows entry, editing and posting of receiving transactions. It displays the Receiving Menu and, if the Edit List is to be printed or Posting is to be done, calls OERECREG.

Data Entry Defaults, validity Checks and Special instructions:

Field 1 Item Number: Validate against Item File.

Field 2 Date Received: Default to System Date; or if a Date Received was previously entered, default to it.

Field 4 Qty Received: Add amount entered to Old Qty on Hand and display New Qty on Hand.

Field 5 New Unit-Cost: Default to Old Unit-Cost. On F1 Key, accept entry of a new value. If the Old Qty on Hand is negative or zero, move the New Unit-Cost to Average Cost; otherwise calculate New Average Cost as follows:

New Average Cost =

$$(\text{Old Avg-Cost} * \text{Old Qty-on-Hand} + \text{New Avg-Cost} * \text{Qty-Received}) / (\text{Old Qty-on-Hand} + \text{Qty-Received})$$
 and then display the result.

Fields 6-9 Default to values currently on the Item File. Changes are made via the "Field Number to Change ?" facility.

## **OERECREG**

This program prints both the Item Receiving Edit List and the Item Receiving Register. It also posts the receiving transactions to the Inventory Item File if posting was selected from the Item Receiving Processing menu.

To post transactions, read the Inventory Record for the transaction being posted and modify the fields for price-1, price-2, price-3, average cost, last cost, quantity on hand and picking sequence.

Also move a space to the Stock Status field. This resets the reorder flag so that this Item will appear on the Purchasing Advice Report when the Quantity goes below the reorder level.



## **Print Price list**

Prints Price List by Inventory Item.

Input: OEITMFIL

Updated: None

Output: Price List

Enter Module From: OE

Programs in Module: OEPRCLST

### **OEPRCLST**

A screen is displayed to ask what the starting and ending range should be.

After the user enters the screen data, the Inventory Item File is read within the selected range. Each Inventory Item's data is printed. Control is returned to OE after the report has been printed if "ALL" was selected for the range to print. Otherwise, a new range or END may be entered.

## **Print Purchasing Advice**

Prints purchasing advice report for all inventory Items and updates Inventory Item file.

Input: OEITMFIL, OECTLFIL

Updated: OEITMFIL

Output: Purchasing Advice Report

## **OEPURADV**

This program prints the Purchasing Advice Report and updates the inventory Item File at the discretion of the user.

The Inventory Item File is read. A test is made to determine if the Item is at reorder level. If the Item is at reorder level, a test is made to determine If the Item was at reorder level on the previous report. If the Item was not at reorder level on the previous report, a test is made to determine if the Item has reached zero Quantity on hand. The data of the Item Is printed. If the Item was at reorder level on the previous report, a test is made to determine if the Item reached zero Quantity on hand since the last report. If the Item has reached zero Quantity on hand since the last report, the data of the Item is printed; otherwise, the Item is bypassed.

When the report printing is complete, a screen is displayed asking If the report is OK. If the user answers "Y" the Inventory Item File is read and updated. All Items which were printed on the report according to the above tests have their Stock Status updated to reflect the fact that they have either reached reorder level or have gone out of stock and that they have been printed on a purchasing advice report.

If the answer to the above screen is "N" (report not OK.), the Inventory Item File is not updated.

## **Print Item Stock status report**

Prints Item Stock Status Report within selected ranges.

Input: COMPFILE, OEITMFIL, OECTLFIL

Updated: None

Output: Stock Status Report

### **OESTKSTA**

This program prints the Item Stock Status Report by Inventory Item number.

A screen is displayed to ask what the starting and ending range or the report should be.

After the user enters the screen data, the Inventory Item File is read within the selected range. Each Inventory Item's data is printed per the report layout. If the user had selected "ALL" Inventory Item's to print, control returns to OE; otherwise, the screen is redisplayed and a new starting and ending range is obtained. The new range is then printed. Control returns to OE after the user has selected "ALL" Items to print or after the END key has been pressed.

## **Print Back orders by item**

Prints Back Orders by Item in Item number order.

Input:        OEBOIFIL  
              COMPFILE  
              ARCUSFIL  
              OEBOISEL  
              OEORDHDR  
              OELINITM

Updated:    OEBOIFIL  
              OEBOISEL

Output:      Back Orders by Item

### **OEBOITEM**

This program prints the Back Orders by Item List either for "ALL" Items or for selected Items. Items which are not currently on file may be selected.

The program creates two new file at the start of program execution: the Back-Order Item File, and the Item Select File.

A screen is displayed to ask what Item numbers the report should be printed for. The user can enter specific Item number selections or default to "ALL" Items.

If the user has entered specific Item number selections, a selection file is built containing those specific selections. If the user has entered "ALL" Items to print, no selection file is built.

The Order Line Item File is read. Each line Item record with a Quantity back ordered greater than zero is then written out into the Back Order Work File, with additional data from the Order Header File.

The Back Order Work File is then read sequentially. If the user has selected "ALL" Items to print, all records are printed as per the report layout. If the user selected specific Items, each record in the Back Order Work File is checked against the selection file to determine if the Item was selected. If the Item was selected, the Back Order Work record is printed as per the report layout.

Upon completion of the report a total line is printed and program control returns to OE.

## **Print Back Orders by Customer**

Prints Back Orders by Customer in customer number order.

Input:           OEBOCFIL  
                  COMPFILE  
                  ARCUSFIL  
                  OEBOCSEL  
                  OEORDHDR  
                  OELINITM

Updated:       OEBOCFIL  
                  OEBOCSEL

Output:         Back Orders by Customer

### **OEBOCUST**

This program prints the Back Orders by Customer List either for "ALL" customers or for selected customers. Customers which are not currently on file may be selected.

The program creates two new files at the start of program execution: the Back-Order Customer File and the Customer Select File.

A screen is displayed to ask what customer numbers the report should be printed for. The user can enter specific customer number selections or default to "ALL" customers.

If the user has entered specific customer number selections, a selection file is built containing those specific selections. If the user has entered "ALL" customers to print, no selection file is built.

The Order Line Item File is read. Each line item record with a Quantity back ordered greater than zero is then written out into the Back Order Work File, with additional data from the Order Header File.

The Back Order Work File is then read sequentially. If the user has selected "ALL" customers to print, all records are printed as per the report layout. If the user had selected specific customers, each record in the Back Order Work File is checked against the selection file to determine if the customer was selected. If the customer was selected, the Back Order Work Record is printed as per the report layout.

Upon completion of the report a total line is printed and program control returns to OE.

## **O/E Control file maintenance**

Input:       COMPFILE  
              OECTLFIL  
Updated:     OECTLFIL  
Output:      None

### **OECTLMNT**

This program is to allow entry and editing of the O/E Control Record.

Open the O/E Control File and attempt to read the record. If there is no record on file, accept entry or fields, Allow any changes and write the record.

If the record exists. display the full contents and allow any changes to be made and rewrite the record.

## Pricing Code file Maintenance

Add, Change, Delete and print price codes.

Input: OECDSFIL  
Updated: OECDSFIL  
Output: Price Code List

### OEPCDMNT

This program is the File Maintenance module for the Price Code File. The Price Code File is actually part of the O/E Codes File.

Since there are many places in this program where very similar entries are made repetitively and since this data is stored for the most part in matrices, loops have been utilised wherever possible in place of the regular screen display, field display, field entry and change paragraphs.

The loops are logically structured per the Warnier Orr method of structuring. The first field is inspected, then a loop is entered. In the loop a field is processed then the next field is inspected. This is performed until all fields have been processed.

For screen displays there is a paragraph that displays one "tag" or one set of "tags". This paragraph is performed a certain number of times. e.g., if a screen consists of five "tags" or five sets of two "tags", a paragraph that displays one tag or set would be performed five times.

For field displays there is a paragraph that displays one field or one set of two fields. This paragraph is displayed a certain number of times.

For pricing code types two and five there are matrices containing up to five customer types. These are displayed one at a time by a loop as above until a field containing only spaces is found. In other words the paragraph would be performed 1 to 5 times.

For field entry there is a paragraph that enters one field, Usually this is performed until as many fields as can be entered have been or the Restart Key is pressed. When a matrix of customer types is being entered, the paragraph is performed until a null entry (spaces) has been made or the matrix is full. If the Restart Key is pressed after the first type has been entered, the matrix of customer types is cleared and entry is started over.

For entry of changes a loop is not required except when changing a matrix of customer types. Normally the screen row and column are just calculated from the Item number to change and the field is re-entered, For a matrix of customer types, changes are allowed to one customer type at a time much as in the entry logic until the first null field (spaces) is reached or the Restart Key pressed. If along the way a customer type is cleared by the user, the rest of the fields in that matrix must be moved back to fill the space.

In add mode, the key is not checked against the file until after the entire record has been entered. This is because what is put into the key depends on data entered later in the program. i.e., the price code customer type is part of the key, but is not entered until number 4 on the screen and then only if the price code type is 3.

Price code type 3 sometimes requires many records to define one price code. For any other type only one record per code is allowed. Therefore, a "Header Record" is stored in the file along with any group of price code type 3 records. This "Header Record" is just a dummy record with the price code in the key, but no customer type (spaces) in the customer type field.



## **Pricing Code File Maintenance**

### **OEPCDLST**

This program prints the Price Code List from the O/E Codes File.

The program prints a separate report layout for each price type 1, 2, 3, 4 or 5. The program will only print a specific report Layout If there are records on file for that specific pricing type.

For pricing type 3, each pricing code has a Header Record on file. These Header Records are bypassed during the printing of the report and are not included with the report data.

Data for each pricing type is printed as per the report layout for that pricing type.

After printing the report(s), control returns to OEPCDMNT.

## **Commission code file Maintenance**

Commission Code File Maintenance: Add, Change, Delete, List

Input:       OECDSFIL  
Updated:     OECDSFIL  
Output:      Commission Codes List

### **OECOMMNT**

This is a standard maintenance module to allow maintenance to the Commission Code File.

### **OECOMLST**

This is a standard print out module to print the contents of the Commission Code File.

## **Period End Closing**

Clears the Period-to-Date Accumulators

Input: OEITMFIL

Updated: OEITMFIL

Output: None

### **OEPCLOSE**

This program clears the Period-to-Date Accumulators in the Inventory (stock) Item File.

Asks the question "Are you Sure You Want to do This ? " on the screen.

If the answer is "Y", read through the Inventory Item File and move zeros to the Sales, Cost and Quantity Sold Period-to-Date fields.

## **Year End Closing**

Clears the Year-to-Date Accumulators

Input: OEITMFIL

Updated: OEITMFIL

Output: None

### **OEYCLOSE**

This program clears the Year-to-Date and Period-to-Date Accumulators in the Inventory Item File.

Ask the question "Are you sure you want to do this ?" on the screen. If the answer is "Yes", read through the Inventory Item File and move zeros to the Sales, Cost and Quantity Sold Period-to-Date and Year-to-Date fields.

## Manual errors or omissions

No manual, much like software is ever bug free, so if you find elements missing or incorrect please report all via the bug reporting tool (Tracker) at the ACAS website on sourceforge.

Remember to specify the manual title and version when doing so, You can also use an email to the address on inside front cover with the subject of Bug: manual or Software etc.

Warning: This product has been discontinued from any further development.

This document was created in part from the source of the original OE document (also supplied) having converted it to a text file that was not without its problems so in some cases there are spelling errors, at least with reference to the UK English standards. In many cases I have correct these but in some I have ignored them, my time :)

Thank you

Vincent.

## Appendix A

### Cobol File Access Error Numbers

00	Success.
02	Creating a Duplicate key on alternative key which allows duplicate keys.
04	Success (but incomplete)
05	Success (Optional File Not Found)
06	Multiple records (in LS)
07	Success (No Unit)
09	LS (line sequential) Bad Data
10	End of file reached if reading forward or beginning-of-file reached if reading backward
14	Out of key range
21	Key invalid
22	Duplicate key condition when duplicate keys are not permitted,
23	Start/Read has been attempted on an optional input file that is not present.
24	Key boundary violation
30	Permanent I/O error
31	Inconsistent file name
34	Boundary violation
35	File not found
37	Permission denied
38	Closed with lock
39	Conflicting attribute
41	Open has been attempted on an already open file.
42	Close has been attempted on an already closed file.
43	Read not done
44	Record overflow
46	Read error
47	"OPEN INPUT" denied (insufficient permissions to read file)
48	"OPEN OUTPUT" denied (insufficient permissions to write to file)
49	"OPEN I-O" denied (insufficient permissions to read and/or write file)
51	Record locked
52	End of page
57	"LINAGE" specifications invalid
61	File sharing failure
71	Bad Character
91	File not available

Most if not all of these are trapped by the programs, but it is possible that some are not expected and therefore could appear.

Note: There may be others but most if not all, are here, see GnuCOBOL Documentation. Most if not all of these indicate a program or data file error and you should report such, giving as much information as possible as to what you were doing at the time in an email to your IT department or the support email address as shown on inside front page.

Please always remember to provide the software version and name of the program or program that was being run that created or produced the error. Also the platform you are running on such as the operating system and hardware if not a Intel or AMD X64 CPU.

## Appendix B

### Error Recovery

Many of the error messages in section “System wide Messages” that relate to missing files can be attributed to only a few reasons:

1. You are in the wrong directory before running, check which one is set in the environment setting for ACAS\_LEDGERS= such as /home/username/ACAS.  
You can find this in a terminal by running -  
`set | grep ACAS`  
this should produce something like this :  
`ACAS_BIN=/home/username/bin`  
`ACAS_LEDGERS=/home/username/ACAS`  
  
So here you should be in the /home/username/ACAS or /home/user/oe
2. The system is corrupted due to a power failure and you are not running your computer on a UPS (Uninterruptible Power Supply). It is seriously advisable to run all business critical computer system on UPS's and here we use units of 1000w or larger depending on the need to keep running times but the 1000w is good enough to finish off any current data entry record and then shut down ACAS and then the system before the UPS software (apcupsd) does it. If no other reason then they give smooth power to the equipment at all times.
3. Files have been deleted in error, you may have to recover from the last back up. These sit in a directory in the ACAS directory called temp-backups. Be careful before running a recovery procedure for example, make sure you do a backup of the contents of the directory first, just in case.  
Here is a perfect reason to make a copy of the backups produced by ACAS onto a USB memory stick or hard drive that you only connect prior to doing so, say daily etc. Create a back up strategy for your company if one does not yet exist and stick to it like glue. Remember to test the recovery of a backup in a temporary directory say '/home/username/ACAS/test-a' just for the purpose and test by running ACAS. For this to work you will need to pass the ACAS directory parameter when loading a ACAS sub-system e.g., for sales you would run  
'sales ACAS\_LEDGERS=/home/username/ACAS/test-a'.

**WARNING:** If you forget to do this, you will be using the data from the standard directory as set up by the install scripts, e.g., /home/username/ACAS.

If running a RDBMS based system ensure you have set up back ups for it, at least for the ACAS database which by default is called ACASDB but you can change it to anything, having made sure it is the same one set up in the ACAS system parameter file. You should do it for all of your databases, along with the rdbms system databases, so just back up the lot on a regular basis. For users of webmin this is an easy process to set up.

For all above references to ACAS, substitute OE as needed. There is NO support for OE or using a RDB database unless migrated over to ACAS.

## Appendix C

### Command Key Summary

Note that these can be slightly different depending on the Cobol compiler you use, the operating system and/or your system settings.

Escape:	Ends the current function or program other than menus.
Return:	Enters data and advances to next request, accepts default value, moves cursor forward screen fields.
^ (UP ARROW):	Moves cursor back one field.
Page Up:	As above or signals request to restart steps.
(Down ARROW):	Moves cursor forward one field.
Page Down:	As above.
Tab:	Moves cursor right to next field or signal end of process step.
END	See above for Tab.
.	
Back Tab:	Moves cursor left to previous field.
F1 to F10:	Where used, see specific program or function documentation. For OE F1, F2 are often used when needed to offer extra functionality for data entry.

Note that there are additional special keys used with OE - see the code base for details.

This ends the OE manual with the following covering the copyright notices for the manual and the Cobol sources etc.



## Appendix D

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