* * U S E R   M A N U A L * *

R E P O R T   W R I T E R

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PREFACE

ABOUT THIS MANUAL

This User Guide for the Report Writer System covers the program run instructions for all of the utilities necessary to generate user defined work. The manual is divided into three major parts with an appendix of several sample exercises for the Wholesale Distribution software application package.

REPORT UTILITY

This part of the manual gives the instructions for creating simple reports using the REPORT utility. It defines the criteria for using this utility and gives step-by-step instructions. It also includes how to print the report after it is created.

EXPRESSIONS

The EXPRMAIN utility is covered in this part of the manual. This is a program which gives the user the ability to perform mathematics calculations on and between various fields in the data base. The result being the creation of a user defined field to appear on reports.

APPENDIX

Several case study / tutorial examples of user defined reports are presented from the Wholesale Distribution software package.

INTRODUCTION

All of the Report Writer Screens are laid out in a consistent manner so as to be easy for the user to know what to look for and where. The top of all screens is the program name, version number and other pertinent system information. The middle 22 lines make up the body where information is displayed and input is accepted. The bottom line is the prompt line which contains information as to the expected answers to the current question as well as the available function keys. If the entire prompt line is not displayed the user can press the [TAB] key to scroll the prompt line left and right. In the sample screen shown in this manual the prompt lines may be shown as multiple lines so that the reader can understand all of the available options.

In order to make the creation of a report a simple task many of the acceptable answers to the questions raised in creating a report are displayed in windows that are displayed when the cursor is a the appropriate question. Other times the user is prompted to hit the HELP key for a multiple choice selection of the available answers.

As a convention all single key answers to the questions are enclosed within brackets []. For example if the enter key is the required response it will appear within this manual as [ENTER]. Throughout the Report Writer Program the [Page Up] key is used to move the user back one entry from the current entry. Repeated use of the [Page Up] key will take the user back to previous steps.

REPORT WRITER

OVERVIEW

Report Writer is a program which enables the user to create custom reports to supplement the standard reports inherent in the user's software package. It can be used on an "as needed" basis to print or display information not available on the standard report formats. The REPORT function prints directly from the data file. SELECT is used to interface with various word processing packages and spreadsheets. Using either, you may extract data from one main file plus any file linked to that main file. The procedures for running both functions of the Report Writer are included in these instructions.

Once created, all specifications for the report are stored in a library for use at any time to regenerate the same report. You can make selected changes for variations on the original report. An added feature lets you also store "run time prompts". For example, in the report specifications, you can set up prompts for "beginning" and "ending" dates which you specify when you run the report. "Run time prompts" preclude the user from having to change the report request prior to printing the required report.

PREREQUISITES

To use Report Writer you must first have a basic understanding of what data files are, how they are structured and how they relate to one another.

Every effort was made to make this user guide easy to understand and follow. Specific examples were used when possible to show sequential steps.

When you purchase Report Writer, your dealer can answer any questions you may have which relate specifically to your software application.

BEFORE YOU BEGIN

1.   You need to set a default printer up for your terminal. When in A/R <**ESC**> to the colon and type in 'RPRINTER'. Select your default printer for your printer.

2.   Know exactly what it is you want to extract and check to make sure that it is not already part of one of the standard reports.

3.   Determine which data file(s) contains the information you want to extract.

4.   Run the utility DESCLIST. This produces a report listing all of the data files and describes each field. Use this report for reference when creating a new report. An excerpt of a DESCLIST is shown on the following page as an example.

5.   Always write down a brief statement as to exactly what you want to produce. Use this as a guide to select the fields and construct any logic statements. For example, "a list of all customers with their phone numbers who have a present account balance which is more than their credit limit and the assigned salesman for their account, and how much has been paid on the account this month". It is also a good idea to layout the required format of the report on a paper prior to creating the report with Report Writer.

6.   The next step is to determine which of the two selection methods to use. If you are designing a report use Report Writer if you are extracting data for input to a word processor use the Select utility.

HOW TO CREATE A REPORT (REPORT OPTION)

There are seven functions involved in producing a unique, user defined report.

     I.   Define the basic report
     II.   Define the output fields
     III. Specify break points and sub totals
     IV.   Define sort sequences and describe any header lines.
     V.   Define any selection test to be performed.
     VI.   Edit the print line if necessary
     VII. Display / Print the report

Items 3 through 6 are optional. Following are step-by-step instructions to de each of the six functions.

```
┌─────────────────────────────────────────────────────────────────────┐
│ I.   DEFINE THE BASIC REPORT                                         │
└─────────────────────────────────────────────────────────────────────┘
```

STEP 1: At the shell prompt type REPORT

"INFINITE SOFTWARE REPORT GENERATOR FOR customer name"

```
┌─────────────────────────────────────────────────────────────┐
│ 1          Name of The Report:.............                 │
│ 2        Title of The Report:                               │
│                                                             │
│ 3        Main Data File Name:                               │
│                                                             │
│ 4            Report Format:                                 │
│                                                             │
│ 5              Output Mode:                                 │
│ 6             Restart Mode:                                 │
│ 7               Total Mode:                                 │
│                                                             │
│          [ESC]  Exit  [HELP]  List Print Functions          │
└─────────────────────────────────────────────────────────────┘
```

The name of the report is prompted. This is the name under which the report will be stored in the library. Press the HELP key to display a list of existing Function Names and descriptions. This list also contains any system generated reports which use Report Writer. Never delete any of these reports and only make modifications to them under the guidance of your dealer.

STEP 2: Type in a system name for this report. You can use up to 20 characters.
EXAMPLE: "Name of the Report...: SPECIAL SALES REPORT"

STEP 3: The system then asks whether the user wants to copy an existing report. If you do not want an existing report copied wither press [ENTER] or type [N]. If you want to copy an existing report in order to make changes and create a new report type [Y]. The system then prompts "Copy what function.......:". The user must type in the function name at this point and go to STEP 12.

STEP 4: The program then prompts for a report title. This title prints across the top of each page of the report. "Title of The Report.......:"

STEP 5: There are three alternatives here.

1. Press [HELP] key and the name you typed in STEP 2 defaults, double spaced.

Example: S P E C I A L   S A L E S   R E P O R T

2. Type in a different title. You can use up to 50 characters.

3. Press [ENTER] and the name you typed in STEP 2 defaults as it appears in the name line.

STEP 6: The program then prompts: Will this report use data generated by SELECT [Y/N]? Always type in N or press [ENTER] when using REPORT to generate the report.

STEP 7: Next, the program prompts: "Main Data File Name...:". Choose the main data file from which to extract the information. This is the data file which contains the fields you want to extract and list. Make a selection by reviewing the DESCLIST report (Paragraph 3 under "BEFORE YOU BEGIN") or by pressing the [HELP] key here to see a list of all the data files.

STEP 8: Either type in the name of the file or press HELP and make a selection from the list.

Example: "Main Data File Name...: RHISTLIN". The file description name is then displayed.

"Main Data File Name...:   RHISTLIN SALES HISTORY BY LINE"

STEP 9: The program then prompts: "Report Format...:". Choose one of the following formats from the displayed window:

```
┌──┬──────────────────────────────┐
│  │  Choose A Print Format       │
│ 1│  Columnar                    │
│ 2│  Two Block Column            │
│ 3│  One Block Column            │
│ 4│  Columnar Rolling            │
│  │                              │
│  │  SELECT:                     │
│  │                              │
│  │  [PAGE UP]  Previous Entry   │
└──┴──────────────────────────────┘
```

Note: Columnar rolling formats can not be used with SELECT option.

Make your selection based on the following examples. Always determine your field sizes and total characters from the "FLD SIZE" column on the DESCLIST. See the DESCLIST illustration for an example.

Columnar - This format prints one line per record, horizontally across the page. There is a maximum of 240 characters and/or 48 columns (fields).

Example:

```
Field 1      Field 2      Field 3       Field 4      Field 5      Filed 6
xxxxxxxxx     xxx         xxxxxx        xxxxxxxxxxxxx    xxxxx
```

Two Column Block - This format prints the data in two blocks per record. Each block can contain up to 24 fields (maximum 48 fields total).

Example:

```
Field 1:   xxxxxxx              Field 7:   xxxx xxxxx
Field 2:   xxxx                 Field 8:   xxxx
Field 3:   xxxxxxxxxx           Field 9:   xxxx xxxxx
Field 4:   xxxx                 Field 10:  xxxx xxxxx
Field 5:   xx                   Field 11:  xxxx
Field 6:   xxxxx xxx xxxxx      Field 12:  xxxxxxxx xxxxxxxxx
```

One Column Block - This format prints the data in one block per record. This block can contain up to 48 fields.

Example:

```
Field 1:   xxxxxxxx
Field 2:   xxxx
Field 3:   xxx xxxxxxx xxxx
Field 4:   xxxxxxxx
Field 5:   xxx xxxxxx
Field 6:   xxxxxxxxx
```

Columnar Rolling Format - When rolling format is specified, rolling data prints in columnar format with its own heading immediately following the columns of the primary

record. A rolling data file is a file containing multiple records connected by pointers. An A/R Open file is a good example of a rolling data file.

Example:

```
Field 1      Field 2      Field 3      Field 4      Field 5
  xxx        xxxxxxxxxx        xxxxxxxxxx  xxxxx

Field 1      Field 2      Field 3
xxxxxxx      xxx          xxxxxx
xxxxxxx      xxx          xxxxxx
xxxxxxx      xxx          xxxxxx
```

STEP 10: The program then prompts: "Output Mode:". Choose one of the responses from the window:

```
┌─────────────────────────────────────────────┐
│ Choose An Output Mode                        │
├───┬─────────────────────────────────────────┤
│ 1 │ Ask at Print Time                        │
│ 2 │ Report Will Be Printed                   │
│ 3 │ Report Will Be Displayed                 │
│   │                                          │
│   │ SELECT:                                  │
│   │                                          │
│   │ [PAGE UP]  Previous Entry                │
└───┴─────────────────────────────────────────┘
```

If you choose Option 1 when you print the report you will be prompted as to whether you want to print or display the report. Option 2 will cause the report to be printed. Option 3 will cause the report to be displayed on the screen.

STEP 11: The system will prompt: "Would You Like The Ability To Restart This Report [Y/N] ?". If a report can potentially be long you may choose to allow restarts. If this option is chosen you will be prompted for a restart point every time you produce the report.

STEP 12: The system will prompt: "Total Mode:". Select the required response from the displayed window:

```
┌─────────────────────────────────────────┐
│ Choose A Total Format                    │
├───┬─────────────────────────────────────┤
│ 1 │ Ask At Print Time                    │
│ 2 │ Print Totals Only                    │
│ 3 │ Print Detail and Totals              │
│   │                                      │
│   │ SELECT:                              │
│   │ [PAGE UP]  Previous Entry            │
└───┴─────────────────────────────────────┘
```

Option 1 implies that the Print program will prompt the user to whether to print totals only or detail. Option 2 will cause totals only to print without the detail. Option 3 will cause the entire report to print. NOTE: If no totals are specified within the report this question is moot.

STEP 13: At this point the report definition page has been completed. If you want to correct one of your previous entries, type in the line number of the field to be changed and reenter the information. Press [ENTER] to continue with the report definition. If, for any reason you wish to abort the creation process at this time press the [Esc] key.

```
╔═══════════════════════════════════════════════╗
║ II.   DEFINE OUTPUT FIELDS                     ║
╚═══════════════════════════════════════════════╝
```

The following screen is displayed and the user is prompted to define the field names to appear on the report.

"Infinite Software Report Writer for customer name"

```
┌───────────────────────────────────────────────────┐
│          Data Fields To Be Printed                 │
├────┬──────────────────────────────────────────────┤
│ 1  │                                               │
│ 2  │                                               │
│ 3  │                                               │
│ 4  │                                               │
│ 5  │                                               │
│ 6  │                                               │
│ 7  │                                               │
│ 8  │                                               │
│ 9  │                                               │
│ 10 │                                               │
│    │                         report size: 001      │
│    │  Data File Name                               │
│    │  or Expression Number:                        │
│    │                                               │
│    │  [ESC]  End Input  [HELP]  List Files/Expressions │
└────┴──────────────────────────────────────────────┘
```

This is the screen where you select and define the fields for your report. There are two ways to do this; 1). Use your DESCLIST as a reference or, 2). Use the [HELP] key.

STEP 1: Press [ENTER] to default the name of the data file you entered on the previous screen or press [HELP] to select one of the associated files from the list. Also you can specify an Expression Number. See HOW TO CREATE AN EXPRESSION for detailed instructions on how to create and use Expressions.

The program then prompts for "FIELD SEQUENCE NUMBER...:". This prompt does not appear if you specify an Expression Number.

STEP 2: Type in the field sequence number. If you are using the DESCLIST for reference, this is the number in the first column. You can also press the [HELP] key to see a list of all of the fields in the selected data file and make a selection.

This will be the first field for the report. The full description for this field then appears next to the appropriate line on the screen and, if you are in columnar mode the length of the print line is displayed to the right of the display box and the format of the print line is displayed below the box for later editing. (See editing the print line below.).

For example:

"Infinite Software Report Writer For customer name"

```
┌─────────────────────────────────────────────────────────┐
│                Data Fields To Be Printed                 │
├───┬─────────────────────────────────────────────────────┤
│ 1 │ CUSTOMER NUMBER                                      │
│ 2 │                                                      │
│ 3 │                                                      │
│ 4 │                                                      │
│ 5 │                                                      │
│ 6 │                                                      │
│ 7 │                                                      │
│ 8 │                                                      │
│ 9 │                                                      │
│10 │                                                      │
│   │                              Report Size:  006       │
│   │ Cust                                                 │
│   │ Number                                               │
│   │ ZZZZZX                                               │
│   │                                                      │
│   │ Data File Name                                       │
│   │ or Expression:                                       │
│   │                                                      │
│   │ [ESC]  End Input  [HELP]  List Files/Expressions     │
└───┴─────────────────────────────────────────────────────┘
```

The program then prompts for another data file name. If you press [ENTER], the last data file name you entered defaults. Press [HELP] to select an associated data file.

STEP 3: Type in the next field sequence number of press [HELP] and select one from the list.

STEP 4: Repeat this procedure and define each output field.

STEP 5: When you finish, press [ESC] to terminate input.

The Prompt Line then displays the following choices:

[ESC] Exit [F2] Next Report [F4] Breaks/Totals [F5] Test [F6] Sort/Header [F8] Edit Print Line [INS] Insert Output Field [Page Down] Next Output Page [Page Up] Previous Output Page

┌───┐
│ **III. SPECIFY BREAK POINTS AND SUBTOTALS**   │
└───┘

Press [F4] to enter either Break Points or Total (or both). The following screen is displayed and the user is prompted for the first break point. A break point is the

field on which you want to summarize data. For example if you want to create a report with totals by state, the state is the break point.

Report Will Be Grouped By The Following Data Fields				
1 2 3 4 5				
The Following Data Fields Will Be Totaled				
6 7 8 9 10				
Data File Name:.........				

You can specify up to five sub total break points, each with up to a 15 character description. The first break point is the primary (major) break point. Each successive break point is a minor break point within the previous break point. Break Points automatically cause the file to sort in the proper sequence.

STEP 1: Press [ENTER] to default the last data file name entered or press [HELP] to select one from the list. If you do not want any break points press [ESC] to select subtotal fields.

STEP 2: The system then prompts for Sequence Number. Type in the field sequence number for the break point field or press [HELP] to select one from the list.

STEP 3: The program then prompts: "Enter the Break Point Description:............." Type in a description to print at this break point. You can use up to 15 characters. If you press [ENTER] the description defaults to the first 15 characters of the "field name".

STEP 4: The system then prompts: "Would You Like To Start A New Page After Each Break [Y/N] ?". If you would like to start on a new page enter [Y], if not either press [N] or [ENTER] to default to no.

STEP 5: You will then be prompted to enter 1 for ascending sorts or 2 for descending sorts fort the break. Enter 1 or [ENTER] for ascending or 2 for descending.

STEP 6: If your break point has been set up in the dictionary as a date field you will be prompted to determine whether you want the break to be:

    1 Break on Day
    2 Break on Week (The starting weekday is then prompted)
    3 Break on Month
    4 Break on Quarter (The starting month for the 1st qtr. is prompted)
    5 Break on Year

Choose your desired response from the table. Follow these procedures and specify up to five break points. When you finish, press [ESC] to end input. The program then prompts for fields to be subtotaled. If you do not want subtotals, press [ESC] to bypass.

You can select up to 24 fields to be subtotaled. Any field to be subtotaled <u>must</u> be a field defined to print as an output field. Each specified field will subtotal at every break point.

STEP 7: Press [ENTER] to default the last data file name entered or press [HELP] to select one from the list.

"FIELD SEQUENCE NUMBER:". Type in the field sequence number or press [HELP] to select it from the list.

STEP 8: If the field chosen is not defined in the dictionary as a numeric field then it will print on the total line. If the field is numeric then the user will be given the following choices:

    1 Print Only
    2 Totaled
    3 Totaled Plus Row Total
    4 Totaled Average

Choose the appropriate response. Option 1 causes the field to print on the total line but not totaled. Option 2 causes the total of the column to print on the total line. Option 3 causes the total of the column to be printed on the total line as well as the row total of all fields similarly chosen on the detail line. Option 4 causes the average of the column to be printed on the total line.

STEP 9: Repeat these procedures to define each field to subtotal. When you finish press [ESC] to continue.

IV.   DEFINE SORT SEQUENCES AND HEADER LINES

To enter sort sequences and/or header lines press [F6]. The following screen is displayed.

```
┌────────────────────────────────────────────────┬──────────────┐
│          Report Will Be Sorted By              │              │
├──┬─────────────────────────────────────────────┤              │
│ 1│                                             │              │
│ 2│                                             │              │
│ 3│                                             │              │
│ 4│                                             │              │
├──┴─────────────────────────────────────────────┴──────────────┤
│    Report Fields Included In The Header                        │
├──┬─────────────────────────────────────────────┬──────────────┤
│ 5│                                             │              │
│ 6│                                             │              │
│ 7│                                             │              │
│ 8│                                             │              │
├──┴─────────────────────────────────────────────┴──────────────┤
│    Data File Name:..........                                   │
│                                                                │
│    [ESC]  Exit  [HELP]  List Files                             │
└────────────────────────────────────────────────────────────────┘
```

If you do not want any sorts, but want to put information on the header line press [ESC].

You can specify up to four sort sequences. The first sort sequence is the major or primary sort. Any subsequent sort sequences are within the previous sort sequence. All sort sequences specified here sort with in the previously specified Break Points.

STEP 1: Press [ENTER] to default the data file name last entered or press [HELP] to select one from the displayed list.

"Sequence Number..:".

STEP 2: Type in the field sequence number for the first sort. The field description defaults to the first sort sequence position. Optionally you can press [HELP] and select the desired field from the displayed list.

STEP 3: Repeat this procedure and select any additional sort sequences. When you finish, press [ESC] to proceed to heading line selections.

```
┌─────────────────────────────────────────────────────────────────┐
│ V.  DEFINE SELECTION CRITERIA                                     │
└─────────────────────────────────────────────────────────────────┘
```

In order to define selection criteria press [F5] and the following screen will be displayed:

```
┌─────────────────────────────────────────────────────────────────────┐
│        Records Will Be Selected If The Following Tests Are True       │
├───┬───────────────────────────┬──────────────────┬──────────────────┤
│ 1 │                           │                  │                  │
│ 2 │                           │                  │                  │
│ 3 │                           │                  │                  │
│ 4 │                           │                  │                  │
│ 5 │                           │                  │                  │
│ 6 │                           │                  │                  │
│ 7 │                           │                  │                  │
│ 8 │                           │                  │                  │
│ 9 │                           │                  │                  │
│ 10│                           │                  │                  │
│ 11│                           │                  │                  │
│ 12│                           │                  │                  │
│ 13│                           │                  │                  │
│ 14│                           │                  │                  │
│   │ Data File Name or         │                  │                  │
│   │ Expression Number:        │                  │                  │
│   │                           │                  │                  │
│   │ [ESC]  Exit  [HELP]  List │ File Names       │                  │
└───┴───────────────────────────┴──────────────────┴──────────────────┘
```

Test specifications allow you to select only those records that you need on any report. Tests can compare information from a record to data in other records or files. Tests can also compare data against values that are put onto the report. Tests can also be make to compare data against information that you will select when you run the report. These "Run Time Prompts" give you the flexibility to create reports that change each time they are run.

1. A maximum 30 tests can be specified.
2. Up to 30 constant values can be used.
3. "OR" logic is permitted.

STEP 1: First, specify the Data File Name or Expression Number. Enter the name of the data file or press [ENTER] to default to the last data file name used or press [HELP] and select the appropriate data file name from the list presented. See HOW TO CREATE AN EXPRESSION for details on using expressions.

"Data File Name or
Expression Number:"

STEP 2: The program then prompts for the Field Sequence Number. "Sequence Number:"
Use the DESCLIST to obtain the number or press [HELP] to select the field from a list of those available.

STEP 3: The program then prompts for the type of comparison. Select the appropriate choice from the displayed list.

```
┌─────────────────────────────────┐
│   What Type of Comparison        │
├───┬─────────────────────────────┤
│ 1 │ Equal To                    │
│ 2 │ Not Equal To                │
│ 3 │ Less Than                   │
│ 4 │ Greater Than                │
│ 5 │ Less Than or Equal To       │
│ 6 │ Greater Than or Equal To    │
└───┴─────────────────────────────┘
```

STEP 4: The program then prompts for the data file name/field sequence number or a constant value to compare against. "Data File Name:". Press [F1] to enter a constant and go to STEP 6 below. Enter the file name or press [HELP] and select the file name from the displayed list.

STEP 5: The program then prompts for the sequence number. Enter the sequence number or press [HELP] and select the field from the displayed list.

STEP 6:   The program responds with a prompt for: "(Alpha)Numeric Constant:". Press [F1] to enter a run time prompt and proceed to STEP 7 below.

Enter the constant to be compared against. The program will allow numbers only if the test field is numeric.

STEP 7:   Instead of entering a specific value above the program allows you to enter the value in the PRINT utility each time that you run the report.

The   program   prompts: "Enter   the   Run   Time   Prompt Text:..............................".
Type in exactly what you want the program to ask for when you run the PRINT utility.
 Each run time prompt can be up to 30 characters long. For example, Run Time Prompts could be as follows:

"ENTER BEGINNING DATE"
"ENTER ENDING DATE"

"ENTER STARTING VENDOR NUMBER"
"ENTER ENDING VENDOR NUMBER"

After you enter the first line, the prompts begin again for another line with the additional option to enter OR logic. Type [F2] to Enter an "OR". When using OR logic, each statement separated by an OR must be a complete statement in itself. After you enter all test specifications, press [ESC] to exit the test specifications screen.

Printing A Report

Once created, a report can be printed at any time.

STEP 1:   Type in PRINT at the shell prompt. This displays a list of all reports available for printing in alphabetical order by report name. If there are more than one page of reports, press [PAGE DOWN] to display the next page or [PAGE UP] for the previous page.

STEP 2:   Type in the number of the report you want in the SELECT field. If the report contains Run Time Prompts, they appear at this point. Enter the requested information. If the report requires sorting an extract will be performed at this time and the sorting will occur. If totals are specified as part of the report, the program then prompts: "Detail or Summary [D/T]". If totals are not specified, this prompt does not appear.

STEP 3:   Depending upon whether you want full detail or summary totals only, type in either D or S. Press [ENTER] to default to detail. The program then prompts: "Display the Report [Y/N]".

STEP 4:   Type Y to display the report on the screen. Type N to print the report. Press [ENTER] to default to printing the report. The report then prints or displays as selected. If the report is displayed on the screen and requires more than the 80 columns available the user may see the remaining columns by pressing the [RIGHT-ARROW] key. [LEFT-ARROW] returns the screen to the left most part of the report.

"Restart the Report [Y/N]".

STEP 5:   Type in Y or N or press [ENTER] to default to N. Normally this will be N. Type Y if you are restarting the report when printing was interrupted for any reason.
 The program will then ask for a particular place to resume printing.

How To Change / Delete Reports

Once created, you can make modification to any report to obtain different variations without having to create a new report. This could be the inclusion of one or more new fields, a different format, different sorts or different test criteria. Once a report is obsolete, you should delete it to make room for new reports.

STEP 1:   Type in REPORT at the shell prompt. The following screen is displayed "INFINITE SOFTWARE REPORT GENERATOR FOR customer name"

1	Name of The Report:........................

```
2    Title of The Report:

3    Main Data File Name:

4         Report Format:

5           Output Mode:
6           Restart Mode:
7            Total Mode:

     [ESC]  Exit  [HELP]  List Print Functions
```

Type in the Function Name or press [HELP] to select it from the displayed list. This
displays the first of the series of Report screens. For example:

"INFINITE SOFTWARE REPORT GENERATOR FOR customer name"

```
     Name of The Report:   SAMPLE
2    Title of The Report:   LIST OF CUSTOMERS

3    Main Data File Name:   RCUSMAS   [CUSTOMER FILE

4         Report Format:   Columnar

5           Output Mode:   Ask at print time
6           Restart Mode:   Ask at print time
7            Total Mode:   Ask at print time

     [ESC]  Exit  [HELP]  List Print Functions
```

Type in the item number you want to change in the SELECT field and make changes.
Note that the Main Data File and Name of The Report do not have an item number.
These fields can not be changed.

TO DELETE THIS REPORT, press [F1]

The program then prompts "Are You Sure?". Press Y to delete or press N or [PAGE UP]
to abort the deletion process.

TO SELECT ANOTHER FUNCTION, press [F2].

Press [ENTER] to begin maintenance of the rest of the print function. The following
screen is displayed:

"Infinite Software Report Writer for customer name"

```
          Data Fields To Be Printed

1    Customer Number
2    Customer Name
3    City
4    State
5    Zip Code
6
7
8
9

     Select:

     [ESC] Exit  [F2] Next Report  [F4] Breaks/Totals  [F5] Test  [F6] Sort/Header
     Edit Print Line  [INS] Insert Output Field  [PAGE DOWN] Next Output Page
```

To Add A Field To The List

Type the next available number from the screen. From the above example you would enter 6.

STEP 1: Press RETURN to default the name of the data file you entered on the previous screen or press HELP to select one of the associated files from the list. Also you can specify an Expression Number. See HOW TO CREATE AN EXPRESSION for detailed instruction on how to create and use Expressions. The program then prompts for FIELD SEQUENCE NUMBER...: This prompt does not appear if you specify an Expression Number.

STEP 2: Type in the field sequence number. If you are using the DESCLIST for reference, this is the number in the first column. You can also press the HELP key to see a list of all of the fields in the selected data file and make a selection. This will be the first field for the report.

The full description for this field then appears next to the appropriate line on the screen and, if you are in columnar mode the length of the print line is displayed to the right of the display box and the format of the print line is displayed below the box for later editing. (See editing the print line below.)

TO DELETE A FIELD

Type in the OUTPUT FIELD NUMBER you want to delete. "Press [F1] to Delete this Field".

TO INSERT A NEW FIELD

Press [INS]. The program prompts: "Insert Before What Output Filed Number:..". The program then prompts for Data File Name or Expression Number and Sequence Number as in report creation mode above. To Change a field select the number next to the line to be changed and enter the number. Once the line to be changed has been selected proceed as above for adding a new line.

ADD/CHANGE/DELETE BREAK POINTS AND SUBTOTALS

Press [F4]. This displays the current BREAK POINTS AND SUBTOTALS screen. For example:

Report Will Be Grouped By The Following Data Fields				
1 2 3 4 5	Salesman Number	Slsmn Total	N	Ascending	

The Following Data Fields Will Be Totaled		
6 7 8 9 10	Total Sales	Totals	

```
    Data File Name:....................

    [ESC] End Input   [F2] Next Report   [F3] Output   [F5] Test   [F6] Sort/
```

TO ADD BREAK POINTS OR SUBTOTALS

STEP 1: Select the next available unused field number from either the Break Points or Subtotals area of the screen, depending on which one you want to add.

"Data File Name or
Expression Number:"

Press [ENTER] to default the main data file or press [HELP] to select an available data file from the list.

"Sequence Number.:".   Type in the Field Sequence Number or press [HELP] to select

13

one from the list of fields. The new field is then added.

TO CHANGE A BREAK POINT OR SUBTOTAL FIELD

Select the Field Number you want to change.

"Data File Name or
Expression Number:"

Press [ENTER] to default the main data file name or press [HELP] to select an available data file from the list.

"Sequence Number..:". Type in the Field Sequence Number or press [HELP] to select one from the list. The field is changed.

TO CHANGE ONLY SUBTOTAL DESCRIPTION

Select the field number for the field whose description you want to change. Press [PAGE DOWN]. The program prompts for a new break point description. Type in the new subtotal description.

TO DELETE A FIELD

Type in the field number of the field to be deleted. Press [F1]

ADD/CHANGE/DELETE SORT SEQUENCES & HEADER SPECIFICATIONS

STEP 1: From any of the screens press [F6]. This screen displays the existing Sort Sequences/Header Specifications screen.

Example:

Report Will Be Sorted By		
1 2 3 4	Customer Name	Ascending
Data Fields Included In The Header		
5 6 7 8	ALPHA 25	Record: 03
	Select:..	
	[ESC] Exit [HELP] List Files	

TO ADD

Type in the next available field number under Sorts or Headers, depending on which you want to add. The program prompts: "Data File Name:". Press [ENTER] to default the main data file name or press [HELP] to select an available data file name.

"Sequence Number:". Type in the Field Sequence Number or press [HELP] to select one from the list. If the added field is a header, complete the record number information.

TO CHANGE

Type in the Field Number you want to change. The program prompts for: "Data File Name:". Press [ENTER] to default the main data file name or press [HELP] to select and available data file name.

"Sequence Number:". Type in the field sequence number or press [HELP] to select one from the list. The new field now replaces the original one.

TO DELETE

Select the number of the field you want to delete. Press [F1]. The field is now deleted.

Adding, Changing or deleting test specifications.

Press [F5] to select the test screen. The following is displayed:

```
        HOW TO CREATE AN EXTRACT FUNCTION USING SELECTMN

        There are six basic functions involved in selecting data for
        integration with the various word processors.

        I.    Define the basic report parameters.
        II.   Create the test specifications.
        III.  Define the output fields.
        IV.   Using you word processor to create the document that you want to
              merge with your selected utility.
        V.    Run the SELECT utility.
        VI.   Run the merge utility available with your word processor.
```

I.   Define The Basic Report Parameters

Type in SELECTMN at the shell prompt. The following screen is displayed:

```
        Function Name...........:
        Function Description....:

        Primary Input File Name.:
        Output File Name........:
        Clear Output File.......:

        Type Of Function........:
        Mask Output Fields......:
```

STEP 1 This is where you specify an identifier for this particular SELECT function. Use up to a 20 character identifier of your choice. When you run the SELECT function this is the "name" of the function.

Example: "Function Name: SPECIAL EXTRACT"

STEP 2 The program then prompts: "Function Description: NAME OF THE MAIN INPUT FILE:" This is the description of the function and is for documentation purposes only.

STEP 3 The program then prompts: "Primary Input File Name:". This is the name of the data file which contains the fields you want to use. Choose this from your DESCLIST or press [HELP] to view a list of all of the available data files and make a selection from the display names..

Example: "Primary Input File Name: RINVMAS".

The program then asks for: "Output File Name:". This is the work file where the extracted records are stored, sorted, etc. before printing. This is normally the work file of the terminal running the select/print function.

Press [F1] to default the work file "WORKXXXX". This means that the OUTPUT FILE will always be the work file of the terminal running the program. If you are selecting data for storage in another file or for merging with a word processor enter the name of the data file or select the file from the list after pressing the [HELP] key.

STEP 5 "Clear Output File:". If you want to start with a new file enter [Y]. If you want to add data to an existing file enter [N].

STEP 6 The program then lists the possible types of extracts that can be performed. Choose the appropriate type from the list.

STEP 7 The program next prompts: "Mask Output Fields:". Usually you will type in [N] here when extracting data for reports. If you type in [Y] and mask the data, then the system treats all data as text and therefore can not do any totals.

At the SELECT prompt either choose the number of the item that you want to change or press [ENTER] to proceed to the test specifications. This displays the TEST SPECIFICATIONS SCREEN.

```
┌──────────────────────────────────────────────────────────────────────────┐
│╔════════════════════════════════════════════════════════════════════════╗│
│║ II.   Create Test Specifications                                        ║│
│╚════════════════════════════════════════════════════════════════════════╝│
└──────────────────────────────────────────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────────────────────────────────┐
│        Records Will Be Selected If The Following Tests Are True           │
├──┬──────────────────────────┬─────────────────────┬──────────────────────┤
│1 │                          │                     │                      │
│2 │                          │                     │                      │
│3 │                          │                     │                      │
│4 │                          │                     │                      │
│5 │                          │                     │                      │
│6 │                          │                     │                      │
│7 │                          │                     │                      │
│8 │                          │                     │                      │
│9 │                          │                     │                      │
│10│                          │                     │                      │
│11│                          │                     │                      │
│12│                          │                     │                      │
│13│                          │                     │                      │
│14│                          │                     │                      │
│  │ Data File Name or        │                     │                      │
│  │ Expression Number        │                     │                      │
│  │ [ESC] Exit     [HELP]    │ List File Names     │                      │
└──┴──────────────────────────┴─────────────────────┴──────────────────────┘
```

Test specifications allow you to select only those records that you need on any report. Tests can compare information from a record to data in other records or files. Tests can also compare data against values that are put onto the report. Tests can also be made to compare data against information that you will select when you run the report. These "Run Time Prompts" give you the flexibility to create reports that change each time they are run.

1. A maximum 30 tests can be specified.
2. Up to 30 constant values can be used.
3. "OR" logic is permitted.

STEP 1 First, specify the Data File Name or Expression Number. Enter the name of the data file or press [ENTER] to default to the last data file name used or press [HELP] and select the appropriate data file name form the list presented. See HOW TO CREATE AN EXPRESSION for details on using expressions.

"Data File Name or
Expression Number:"

STEP 2 The program then prompts for the Field Sequence Number. "Sequence Number:". Use the DESCLIST to obtain the number or press [HELP] to select the field from a list of those available.

STEP 3 The program then prompts for the type of comparison. Select the appropriate choice from the displayed list.

```
┌──────────────────────────────────────────────────────────────┐
│        What Type of Comparison                                │
├────┬─────────────────────────────────────────────────────────┤
│1   │ Equal To                                                │
│2   │ Not Equal To                                            │
└────┴─────────────────────────────────────────────────────────┘
```

3	Less Than
4	Greater Than
5	Less Than or Equal To
6	Greater Than or Equal To

STEP 4   The program then prompts for the data file name/field sequence number or a constant value to compare against. "Data File Name:". Press [F1] to enter a constant and go to STEP 6 below. Enter the file name or press [HELP] and select the file name
from the displayed list.

STEP 5   The program then prompts for the sequence number. Enter the sequence number or press [HELP] and select the field from the displayed list.

STEP 6   The program responds with a prompt for: "(Alpha) Numeric Constant:". Press [F1] to enter a run time prompt and proceed to STEP 7 below. Enter the constant to be compared against. The program will allow numbers only if the test field is numeric.

STEP 7   Instead of entering a specific value above the program allow you to enter the value in the PRINT utility each time that you run the report. The program prompts: "Enter the Run Time Prompt Text:........................".

Type in exactly what you want the program to ask for when you run the PRINT utility. Each run time prompt can be up to 30 characters long. For example, Run Time Prompts could be as follows:

"ENTER BEGINNING DATE"
"ENTER ENDING DATE"

"ENTER STARTING VENDOR NUMBER"
"ENTER ENDING VENDOR NUMBER"

After you enter the first line, the prompts begin again for another line with the additional option to enter OR logic. Type [F2] to Enter an "OR". When using OR logic, each statement separated by an OR must ne a complete statement in itself. After you enter all test specifications, press [ESC] to exit the test specifications screen. The options at this time are:

        [F1] For Next Function   [F1] Output Fields

III.   Define Output Fields

Press [F1] to proceed to output field definition. The following screen is displayed:

```
 Fields Selected For Output


    Data File Name or
    Expression Number:
```

Press [ENTER] to default the main data file name or last data file name entered or press [HELP] to display a list from which you can select an appropriate entry. The program then prompts for: "Sequence Number:".

Type in the field sequence number for the first field or press [HELP] to select one from the list. Repeat this procedure to define each field on the report. When you finish, press [ESC] to display the available options at the bottom of the screen. Pressing [ESC] at this time ends the SELECTMN function and saves the created function

on disk. Pressing [F1] saves the created function and allow the user to begin working on a new function. Pressing [F2] allows the user to go to the test screen.

IV.   Run The SELECT Utility

The next step is to run SELECT and extract to specified data. At the shell prompt type in SELECT. A menu of SELECT functions is displayed. Choose the number to the left of the desired operation or press [ESC] to exit. If this SELECT FUNCTION has

been run previously, the following message displays:

"THERE ARE ALREADY OUTPUT RECORDS EXISTING FOR THIS FUNCTION. DO YOU WANT TO ADD ON TO THE EXISTING RECORDS (Y OR N) ?"

If you specify Y, then the data extracted this time will be added to whatever data was extracted the last time the SELECT was made. If you specify N, then only data from this extract will print on the report.

If you specified any RUN TIME PROMPTS during the creation of the SELECT function they will be displayed at this time. You may answer the questions or press [ENTER] to ignore the requested test.

When the extract is complete, the program displays the number of records extracted. "XX RECORDS WERE SELECTED"

V. Perform The Required Merge

The last step in generating a merged letter is to run the merge function of your word processor. See your word processing manual for further instructions.

EXPRESSIONS

OVERVIEW

Expressions are user defined calculations to be performed on and between specific fields. The results of these calculations are given descriptions which print on reports as "new fields".

As with REPORT and SELECT, the fields must be from one main data file or a data file related to the main file. An example of this would be to perform a calculation to subtract inventory quantities committed through invoicing and order entry from quantity on hand. The result of this calculation is then expressed as a new field called QUANTITY AVAILABLE. All of the fields used are in the Inventory Master File.

GENERAL RULES

1.   Every expression must end with an operation code of 0 or 6.

2.   All calculations are sequential without grouping. To group calculations, use nested expressions. (This means that you should use one expression for each of the parenthesize groups with a calculation.)

3.   All arithmetic is done in whole numbers with implied decimals. Rounding should be used to truncate results from multiplication. You may also have to multiply a number by a constant to achieve accurate division. For example, to compute a percentage the formula would be:

     DIVISOR * 100/DIVIDEND = RESULTS

HOW TO CREATE AN EXPRESSION

Determine which main data file to use by reviewing the DESCLIST. Continuing the above example, suppose you want an Inventory Report which lists:

1. Product Category Number
2. Item Number
3. Item Description
4. Quantity on Hand
5. Quantity Committed Invoicing
6. Quantity Committed Order Entry.
7. Quantity Available

Looking at the Inventory Master File, we find that all of the fields we want to use are listed except Quantity Available. You can create this field, however, by using an expression to subtract the quantities committed from the quantity on hand.
To do this you first create the expression, then use the expression number as a field reference when you create the report using the REPORT utility.

STEP 1 To begin, choose the fields to make the calculations on. These can only be numeric fields. Make a note of the field sequence numbers. At the shell prompt, type in EXPRMAIN. The program then displays:

1. ADD A New Expression
2. CHANGE An Existing Expression
3. DELETE An Existing Expression
4. Print A Listing Of Expressions

        SELECT:
        [ESC] to Exit

STEP 2 Select #1 - ADD A New Expression

"EXPRMAIN"-- Expression File Maintenance

```
EXPRESSION RECORD NUMBER:---1                    Add

1.  Expressions Description.....:...............................
2.  Columnar Description........:
3.  Data Mask Number............:
4.  Register Number For Results..:

Component  Description  Operation   Reference  Description

[PAGE UP]  Previous Entry
```

1.   EXPRESSION DESCRIPTION - This is the user defined description for this record.
      You can use up to 30 characters. For example, QUANTITY AVAILABLE.

2.   COLUMNAR DESCRIPTION - This is the heading which will print on the report.
      This description can be put on 1, 2, or 3 lines by separating each line with an
      underscore character[_].   The total number of characters is 30 with no more
      than 30 divided by the number of lines on each line. For example if you wanted
      to put the columnar description on 2 lines each line could be no more than 30/2
      or 15 characters.

      For example QTY_AVL. This would print on 2 lines as QTY
                                                          AVL

3.   MASK NUMBER FOR DISPLAY - A mask number denotes a particular output format.
      Each output. Each output format has its own mask number. The mask numbers are
      system defined and you must use one of the available masks. You can not create
      one at this time. If you do not know the mask number simply hit the [HELP] key
      to display a list of masks on the screen.

      To print a list of the masks, choose option 4 above.

For example, a numeric output format for dollars and cents with seven places for the
dollars and two decimal places for cents is expressed as "Z,ZZZ,ZZX.XX". Z's denote
that nothing will print if there is no value, whereas X's denote that a zero will
print when there is no value.

In selecting a mask to use for your output, keep in mind that the output to be
created must fit the mask. If the output result is larger than the mask, the high
order digits (the left most digits) will be lost.

In the example we are using, we want a mask which will show quantity. Press the HELP
key and use the PAGE UP and PAGE DOWN keys to find a mask that is appropriate:

"Data Mask Number: 0032 ZZ,ZZZ,ZZX"
Choosing this mask gives us a quantity calculation up to 99,999,999.

4.   REGISTER NUMBER FOR RESULTS - This option gives you the capability to store the
      results of this series of calculations in a user defined register.   This
      register can then be used in another expression if needed without having to
      redefine the same calculations again.

In the example we are using, we do not need to store the results so press RETURN to

default 00 (No register).

STEP 3 Now we create the formula. Note that the bottom of the screen has changed to prompt you as follows:

"Type of Component: [1=File/Field, 2=Expression, 3=Constant, 4=Register]"

Begin by selecting one of the available choices. Usually, this is:

1.   File/Field which defines a data file and field.

2.   Expression- Choose this to input the results from an existing expression.

3.   Constant- Choose this to enter a specific numeric value.

4.   Register- Choose this to enter information from a previously created register value.

Select #1 - File/Field. The program prompts for a file name: "Data File Name:......".

STEP 4 Type in the data file name which contains the fields to calculate. Press HELP to display a list of all of the available files. The Page Up and Page Down keys allow you to scroll through the help screen.

"Data File Name: RINVMAS". Since we are using the Inventory Master File for the example, we have typed in RINVMAS.

STEP 6 The program prompts for the sequence number. "Field Sequence Number: 5". Type in the field sequence number for the first calculation or press HELP to select one from a list of all fields for this file. Note that the field is now entered on the top of the screen. The program then prompts for: "Reference File Name:"

If the specified field has a reference to another data file where the information is stored, enter the name of that data file. You can determine this by checking the DESCLIST. If there is a reference file, it will be listed in the Key/Pointer to File column. Press RETURN to bypass.

STEP 6 The program now prompts for the operation code. Note that the bottom of the screen has changed to show the allowable prompts:

```
[0=Results, 1=Add, 2=Subtract, 3=Multiply, 4=Divide, 5=Module, 6=Round]
```

The operations are:

0=Results - The expression is complete

1=Add - This and the next expression component are added together

2=Subtract - Then next expression component is subtracted from this component

3=Multiply - This and the next expression component are multiplied together

4=Divide - This component is divided by the next component

5=Modulus - This component is divided by the next component and the remainder is the result of the expression

6=Round - The results of the previous expression components are rounded n digits where n is prompted by the choice of 6.

For the example, we are subtracting, so we select #2. The screen now looks like this:

```
Component Description      Operation              Reference Description
QUANTITY ON HAND           Subtract               File: Rinvmas, Seq: 0005


Type of Component: [1=File/Field, 2=Expression, 3=Constant, 4=Register]
```

```
SELECT:
```

STEP 7 Select #1 again. "Data File Name: RINVMAS.". Press RETURN to default the same main data file name.

"Field Sequence Number: 13". 13 is the sequence number of the field QUANTITY COMMITTED INVOICING.

STEP 8 "OPERATION CODE NUMBER: 2". In this example we are still subtracting another value, so we enter 2 again. The screen now looks like this:

```
Component Description      Operation              Reference Description
QUANTITY ON HAND           Subtract               File: RINVMAS,  Seq: 0005
QUANTITY COMMITTED    Subtract              File: RINVMAS,  Seq: 0013

Type of Component: [1=File/Field, 2=Expression, 3=Constant, 4=Register]

SELECT:
```

Again, select #1 - File/ Field. "Data File Name: RINVMAS". Press RETURN to default the same data file name.
"Field Sequence Number: 32". Sequence 32 is QUANTITY COMMITTED BY OE (Order Entry).
"OPERATION CODE NUMBER: 0=Results".

Since this is the last operation for the example, we select 0=RESULTS. Every Expression must end with this operation code or a 5 (Modulus) or a 6 (Rounding). The screen now looks like this:

```
Component                  Operation              Reference Description
QUANTITY ON HAND           Subtract               File: RINVMAS, Seq: 0005
QUANTITY COMMITTED    Subtract              File: RINVMAS, Seq: 0013
QUANTITY COMMITTED OE      Results                File: RINVMAS, Seq: 0032

Type of Component: [1=Field, 2=Expression, 3=Constant, 4=Register]

SELECT:
```

This is the end of the expression. The following selections appear at the bottom of the screen.

"[ESC] Exit [F1] Next Expression [F2] Add an expression component"

Glance over the expression. If you want to add a component, press F1 and proceed as above. If you are finished with all expression maintenance press [ESC]. If you want to add another expression press [F2]. If you want to change an expression component proceed to changing a component below.

TO PRINT A LIST OF STORED EXPRESSIONS

Type EXPRMAIN at the shell> prompt and choose number 4. The list then prints automatically.

HOW TO CHANGE / MODIFY EXPRESSIONS

Once created, an Expression can be changed or modified to obtain a different value or totally changed to create a new Expression.

STEP 1

At the monitor, type in EXPRMAIN

1. ADD A New Expression
2. CHANGE An Existing Expression
3. DELETE An Existing Expression
4. Print A Listing of Expressions

SELECT: "[ESC] Exit". Select #2 - Change An Existing Expression. The program then prompts: "Expression Number:......:".

STEP 2 Type in the Expression Number to change. The current information for that Expression displays: For example:

```
EXPRESSION RECORD NUMBER:---1            Add

1. Expressions Description......:...............................
2. Columnar Description.........:
3. Data Mask Number.............:
4. Register Number For Results...:

Component Description      Operation              Reference Description

5. QUANTITY ON HAND        Subtract               File: RINVMAS, Seq: 0005
6. QUANTITY COMMITTED      Subtract               File: RINVMAS, Seq: 0013
7. QUANTITY COMMITTED OE   Results                File: RINVMAS, Seq: 0032

SELECT:
```

STEP 3 [ESC] Exit [F1] Next Expression [F2] Add an Expression Component

Any item on the screen can be changed by selecting the appropriate number on the left of the item to be changed. Type in the new information. The new information replaced the old.

TO DELETE AN EXPRESSION COMPONENT

STEP 1 Select the component to be deleted / changed. The bottom of the screen changes as follows:

```
"[PAGE UP]  Previous Entry  [F1]  Delete This Component".  Choose [F1] to delete
the entry or press [PAGE UP] to void the change/deletion.  When you finish all
changes/modifications to the expression, press the [ESC] key to exit.
```