SPERRY

PUBLICATIONS UPDATE

Operating System/3 (OS/3)

MAPPER™ 80 Manual Functions User Guide

UP-9735-A

This Library Memo announces the release and availability of "Updating Package A to SPERRY Operating System/3 (OS/3) MAPPER 80 Manual Functions User Guide", UP-9735.

MAPPER 80 is a general online report processing system that uses a report structured data base. You do not have to understand programming to use MAPPER 80. Users can create and delete reports; manipulate data within reports; design new formats and applications; execute runs; and design new runs.

Manual functions are used from a workstation to create, display, print, and manipulate data in MAPPER 80 reports.

This manual describes the MAPPER 80 manual functions and provides examples of their use. The reports used in the examples are from the self-training data base supplied with the MAPPER 80 system; this allows the user to practice using manual functions while using this manual.

This update provides expanded coverage for:

- Data entry using upper or lowercase characters
- Trailer lines in RID 0
- The CONNECT command
- Using the update functions
- Using the CHANGE, SORT, and AUXILIARY reference functions.

Copies of Updating Package A are now available for requisitioning. Either the updating package only or the complete manual with the updating package may be requisitioned by your local Sperry representative. To receive only the updating package, order UP-9735–A. To receive the complete manual, order UP-9735.

LIBRARY MEMO ONLY	LIBRARY MEMO AND ATTACHMENTS	THIS SHEET IS
Mailing Lists BZ, CZ, MZ, 28U, 29U,	Mailing Lists B00 and B36 (Package A to UP-9735, Cover and 35 pages plus Memo)	Library Memo for UP-9735–A
		RELEASE DATE: September, 1984

SPERRY

PUBLICATIONS RELEASE

Operating System/3 (OS/3)

MAPPER® 80 Manual Functions

User Guide

UP-9735

This Library Memo announces the release and availability of "SPERRY® Operating System/3 (OS/3) MAPPER 80 Manual Functions User Guide", UP-9735.

MAPPER 80 is a general online report processing system that uses a report structured data base. You do not have to understand programming to use MAPPER 80. Users can create and delete reports, manipulate data within reports, design new formats and applications, execute runs, and design new runs.

MAPPER 80 capabilities include column-formed report entry, storage, retrieval, updating, and hard copy output. For column-formed reports, report processing functions include searching, sorting, matching, totalizing, and character-string location and change.

Run functions automate and speed report processing when manual functions are combined and used repetitively.

Manual functions are used interactively from a workstation to create, display, print, and manipulate data in MAPPER 80 reports.

This manual describes MAPPER 80 manual functions and provides examples of their use. The reports used in the examples are from the self-training data base supplied with the MAPPER 80 system; this allows the user to practice the manual functions while using this manual.

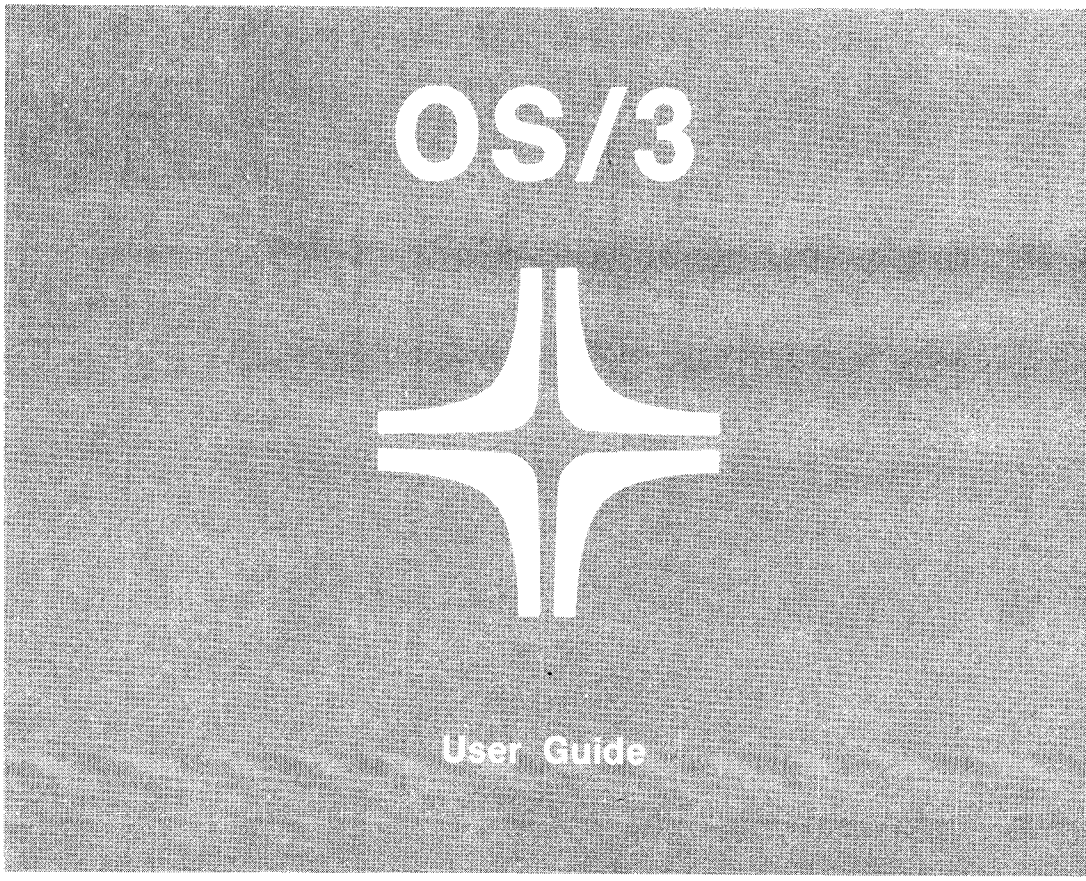
This user guide is one of a series of MAPPER 80 manuals designed to instruct both novice and experienced users in the MAPPER 80 system. Current versions of the following MAPPER 80 manuals are also available:

- Introduction, UP-10000
- Forms generation and utilities user guide, UP-9736
- Run functions user guide UP-9734
- Operator and coordinator user guide, UP-9737

Additional copies may be ordered by your local Sperry representative.

LIBRARY MEMO ONLY	LIBRARY MEMO AND ATTACHMENTS	THIS SHEET IS
Mailing Lists BZ, CZ and MZ	Mailing Lists B00, B36, 28U, and 29U (Cover and 172 pages)	Library Memo for UP-9735
		RELEASE DATE: December, 1983

MAPPER 80
Manual Functions



SPERRY

UP-9735

This document contains the latest information available at the time of preparation. Therefore, it may contain descriptions of functions not implemented at manual distribution time. To ensure that you have the latest information regarding levels of implementation and functional availability, please consult the appropriate release documentation or contact your local Sperry representative.

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Preface

This manual is one of a series designed to instruct and guide the SPERRY Operating System/3 (OS/3) MAPPER 80 user.

MAPPER 80 software conforms to your needs. With this manual, you can understand the manual functions of the MAPPER 80 software without having any knowledge of computer programming.

This manual explains the interactive (manual) functions of the MAPPER 80 software and is arranged so that you can practice these functions while operating from a workstation. You can practice the functions directly on the workstation screen; this is the best way to learn MAPPER 80 software. The sample data used in the examples in this manual is contained within the MAPPER 80 data base. You should freely use this data in conjunction with the explanations given here.

Once you master the interactive manual functions, three additional manuals are available to give you an overall understanding of how to use MAPPER 80 software:

- MAPPER 80 system operator and coordinator user guide, UP-9737 (current version)

  Discusses MAPPER 80 operations, including system generation and data base system coordination.

- MAPPER 80 run functions user guide, UP-9734 (current version)

  Describes a powerful set of procedure-like run functions that call sequences of manual functions to manipulate reports or the data within them.

- MAPPER 80 form generation and utilities user guide, UP-9736 (current version)

  Describes how to generate forms and use MAPPER 80 utilities.

This manual is divided into nine sections:

- Section 1. MAPPER 80 Software Overview

  Provides an overview of the MAPPER 80 environment.

- Section 2. Basic Concepts of MAPPER 80 Software

  Describes the MAPPER 80 software configuration, reports, results, and the self-training data base.

- Section 3. What You Must Do before and after a MAPPER 80 Session

  Explains how to access MAPPER 80 software and the methods for using manual functions.

- Section 4. Report Access Functions

  Describes common functions that access and display reports and results.

- Section 5. How to Use Line 0 for Report Positioning

  Explains how to use line 0 for report display and positioning.

- Section 6. Update Functions

  Describes the functions that update reports and results.

- Section 7. Reference Functions

  Explains functions that reference specified data in a form type, report or result.

- Section 8. Calculation Functions

  Describes functions that move, fill, or perform various vertical and horizontal arithmetic operations on fields within a report or result. This section also explains how to control the display of headers for calculation results.

- Section 9. Printout Functions

  Tells how to print out reports or results on the system printer or an auxiliary printer.

- Appendixes

  Appendix A presents summary tables listing all the MAPPER 80 manual functions, the fast access method for each function, and the options available with each function. Appendix B describes statement conventions used throughout this manual.

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A. SUMMARY OF MAPPER 80 MANUAL FUNCTIONS

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FIGURES

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1. MAPPER 80 Software Overview

1.1. OBJECTIVE OF MAPPER 80 SOFTWARE

MAPPER 80 software is a general use, interactive, report-processing system.

You can use the MAPPER 80 software with reports in free format or reports that have a predetermined form. You can perform input, storage, inquiry, updating, and output of hard copy. For reports with a designated format, you can use report processing functions for searching, sorting, matching, totalizing, character string searching, and changing. You perform all these functions at the workstation using interactive mode.

When you repeat a series of manual functions, such as fixed form handling of a report, data search, sorting, and all types of calculations, you can record that pattern for subsequent use in a run. You can conveniently execute that series of functions by calling the run from the workstation. See the MAPPER 80 run functions user guide (UP-9734) for further information about run functions.

1.1.1. The MAPPER 80 Coordinator

You control most MAPPER 80 operations, such as creating, updating, deleting, formatting new reports, and planning new runs. However, a MAPPER 80 coordinator is required to supervise the overall use of the MAPPER 80 software. The coordinator's supervisory duties include planning, development, and use of report data bases, and the interfacing of those reports with the other application files of the MAPPER 80 software.

In addition, the MAPPER 80 coordinator establishes and coordinates the security of data bases, and plans, implements, and assists with an education and training program for MAPPER 80 users.

1.1.2. Security

The amount of security you need depends on the content of the data and the way it is used. MAPPER 80 software provides several types of security, covering factors from the range of use of the data base to the handling function of the individual reports. To use the MAPPER 80 system, you must be registered in the system through the MAPPER 80 coordinator. The MAPPER 80 coordinator will consult with you to determine your security needs.

1.1.3. MAPPER 80 Software and the Workstation

You access MAPPER 80 software through a workstation.

There are three types of workstation configurations for System 80. One type is attached directly to the computer and is called a local workstation. The second and third types are connected to the computer through communications software and are called a remote workstation or terminal.

To the MAPPER 80 user, the main difference between the types is that remote workstations and terminals require an extra step in the logon procedure for you to access the MAPPER 80 data base (see 3.1).

Unless there are specific differences to the MAPPER 80 user (as in the logon procedure), we use the general term workstation to refer to all configurations.

2. Basic MAPPER 80 Concepts

2.1. STRUCTURE OF THE DATA BASE

There are three data classifications recorded in a MAPPER 80 data base: mode, type, and report.

To better understand the MAPPER 80 data base, picture it as a group of filing cabinets, as in Figure 2–1.

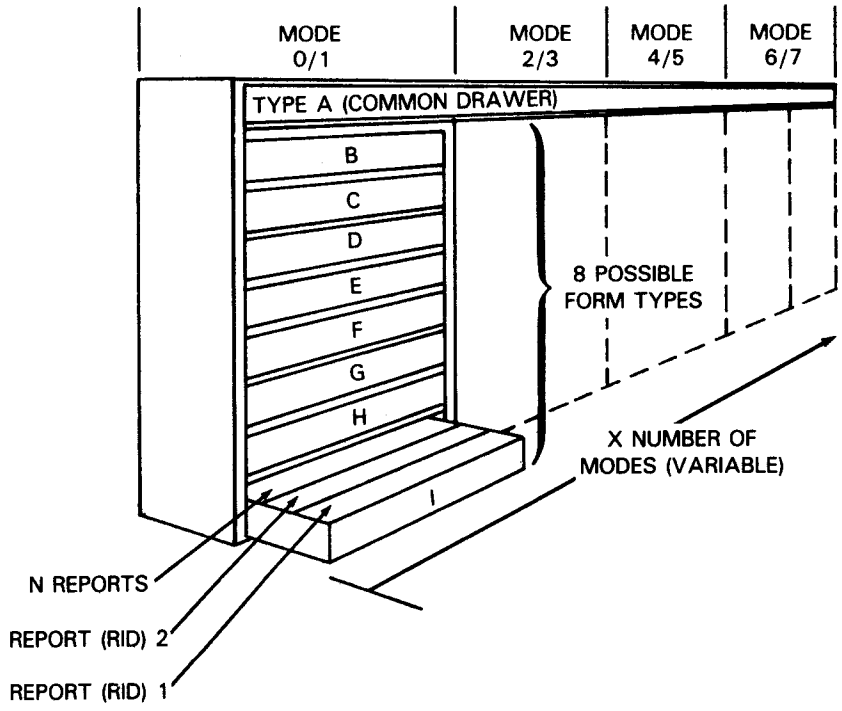


Figure 2–1. MAPPER 80 Data Base Structure

Mode indicates a basic data grouping, and is illustrated in Figure 2–1 by a pair of numbers at the top of each filing cabinet. Odd numbered modes allow you to read but not update data. You can both read and update data in even-numbered modes. The MAPPER 80 coordinator assigns the specific mode numbers. The coordinator uses an odd numbered mode to prevent accidental destruction of a report.

Each mode (or each cabinet in Figure 2–1) is made up of eight form types (drawers). The data within each form type has basically the same headers, format, and line length, and is thought of as the same type of report. The form types of each mode are lettered from B to I. Type A contains free format reports, and you can access it from any mode.

When signing onto the MAPPER 80 system (3.3), you select a mode. All subsequent references are to the data in that mode. You cannot reference data in other modes until you explicitly change modes. (See 4.2.1.)

Within each type (or each drawer in Figure 2–1), there are a number of reports (folders). Each report has its own number, which is referred to as a RID (report identifier). All reports are specified by mode, type, and RID.

Each report is made up of lines, and every line is made up of 80 to 132 characters. Each line within a report contains the same number of characters.

2.2. MANUAL FUNCTIONS AND RUN FUNCTIONS

Each action used to manipulate data is called a manual function. For example, commonly used functions are DISPLAY, FIND, SOE UPDATE, SEARCH, MATCH, and SORT. You enter manual functions from a workstation.

A quick reference table covering all the MAPPER 80 manual functions appears in Appendix A, along with the method of calling each function.

A sequence of functions could be repetitively executed as a typical operation. Use a run to automatically execute these repetitive operations. By combining and storing any number of run functions in a run, you can later execute them using a single key-in procedure. The run functions are described in the MAPPER 80 run functions user guide, UP-9734 (current version).

2.3. REPORTS

2.3.1. Special Features

MAPPER 80 reports can have a maximum of 132 characters per line. Most reports contain less than 1000 lines. The MAPPER 80 coordinator determines the size of each report and the number of reports used in one form type.

You can enter MAPPER 80 commands and data in either uppercase or lowercase; however, MAPPER 80 software translates everything to uppercase. Therefore, lowercase data cannot be stored in MAPPER 80 reports.

You can add or delete reports from the MAPPER 80 data base using manual functions.

2.3.2. Report Format

The report format refers to the arrangement of the data within the report (form). You can create up to six variations of one basic format and then select the format you want to use during a MAPPER 80 session.

A RID 0 is assigned to each report to indicate which form type it falls under. The RID 0 is explained in the MAPPER 80 form generation and utilities user guide UP-9736 (current version).

2.3.3. System Control Lines (Line 0, Line 1)

The first line on the display screen controls the display of the report on the screen and is called line 0. Line 0 consists of fields that control the positioning of the reports (Section 5). The report displayed on the screen starts with the line after line 0.

The first line of any report is called line 1. The following is a typical line 1:

```
.DATE  83/06/10  16:30:46  TYPE=B  RID=001  82/12/23  JDOE        <   30 LINES>
```

where:

83/06/10
Is the date of the last update.

16:30:46
Is the time of the last update.

TYPE=B
Is the report type (A through I).

RID=ØØ1
Is the report number and is unique within a form type.

82/12/23
Is the date of origin of the report or the date the report was last replaced.

JDOE
Identifies the last user to update the report.

<3Ø LINES>
Is the number of lines processed or generated by a function. For example, if you display report 2B (Figure 2–4), the number of lines processed is 48. This includes every line after line 0, up to and including the **END REPORT**. If you search report 2B for SH in the ST CD field, the generated result is 20 lines.

Figure 2–2 shows an example of line 0 and line 1 together.

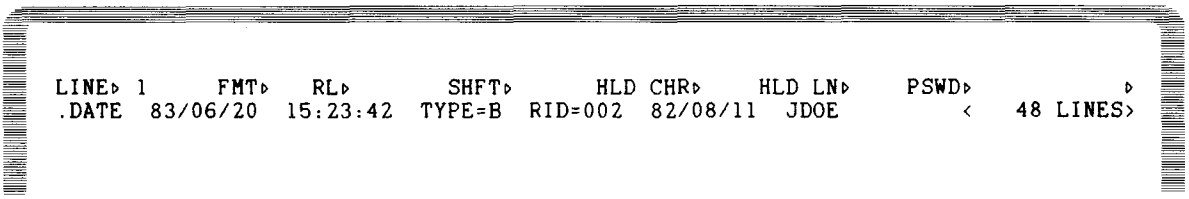


Figure 2–2. Lines 0 and 1

2.3.4. OS/3 System Message Display and Line Control (L)

OS/3 system messages are displayed on the screen during a MAPPER 80 session. Because these messages appear on the first two lines of the screen, line 0 and line 1 disappear whenever a message is displayed. You can redisplay these two lines at any time by keying in the letter L in the home position (at the upper left corner of the screen) and press the XMIT (transmit) key.

2.3.5. Error Display and Last Line Redisplay Function (LL)

If you make an error in an instruction or make an incorrect specification during a MAPPER 80 session, an error message immediately appears on the last line of the screen. If an error message appears while a report is on the screen, the error message wipes out the last line of data on the screen. To redisplay this data line, key in the letters LL in the home position or after the start-of-entry (SOE) symbol on line 0, and press the XMIT key.

2.3.6. Line Types

Three types of lines are utilized in a MAPPER 80 report:

1. Tab lines

   Tab lines begin with a tab character. Note that the tab character itself is invisible and does not appear on the screen.

   Tab type lines are edited, i.e., scanned for allowable characters. The characters (alphabetic, numeric, blank, or combinations) must agree with the input edit codes made when the form type was generated. Tab type lines can be from 80 to 132 characters in length and are controlled by format changes. Most lines of data in a report are tab type lines.

2. * lines

   These lines begin with an asterisk (*).

   Asterisk type lines are not edited, i.e., not scanned for allowable characters. Asterisk type lines can be from 80 to 132 characters in length and are controlled by format changes. In search and sort results, asterisk type lines follow tab type lines as trailer lines. Asterisk type lines are used for column headings.

3. . lines

   These lines begin with a period (.).

   Period type lines are not edited, i.e., not scanned for allowable characters. Period type lines can be up to 80 characters in length and do not shift with format changes. In search and sort results, period type lines follow tab and asterisk type lines as trailer lines. Period type lines are used for comments following lines of data. The system usually generates lines 1 and 2, which contain general header information, as period type lines.

2.3.6.1. Trailer Lines

An * or . line that follows a tab line within a report is called the trailer line of the tab line that immediately precedes it. This trailer line usually is an extension to the tab line.

You usually use the reference functions (Section 7) with a tab line as the objective. (See note.) When the reference function result is displayed, the tab line to which the reference is made and its trailer line are displayed.

NOTES:

1. *You can use options to specify * and . lines as reference objectives (7.5.5).*
2. *You must generate at least one blank asterisk (*) and one blank period (.) type line in the predefined lines of RID 0. For more information about generating predefined lines, see MAPPER 80 Forms Generation and Utilities User Guide, UP-9736 (current version). See subsection 6.2.2.2 of this manual for information about adding predefined lines to a report.*

2.4. RESULTS

Some MAPPER 80 manual functions produce a temporary display screen called a result. You can see when a screen is a result because ▽▽RESULT△△ or ▽ UPRESULT △ is displayed on the right side of line 0 in the PSWD field.

You create a result by using certain functions on a report or on another result. A result is erased from the workstation screen when you perform another function. For example, when a report is displayed, the display is of the report, not a result. But if, for example, you use the TOTALIZE function to perform arithmetic calculations on fields within a report, the screen displayed afterwards shows a result, not a report.

You can then use the TOTALIZE function on this result to produce another result, or you can use another function on the report or the result. In either case, as soon as you use a subsequent function, the previous result is erased from the screen. However, you can once again display the previous result using the PREVIOUS RESULT DISPLAY (PRED) function. This is discussed in 4.5.

If you produce a result that you want to save, use the DUPLICATE REPORT function (6.3.2) or the REPLACE function (6.3.3).

2.5. SELF-TRAINING DATA BASE

MAPPER 80 software provides a self-training data base that you can use to practice MAPPER 80 functions. This data base is stored in the education mode.

The examples in this manual explain MAPPER 80 functions using the data base in the educational mode. The types of reports contained in the self-training data base are shown in Figures 2–3 through 2–6.

2.6. TRANSMITTING MAPPER 80 SCREENS

Most examples in this manual are shown on a screen or sequence of screens. Unless otherwise noted, assume that the entries or parameters keyed into these screens are sent to the system when you press the XMIT (transmit) key, and that screens following each other in a series are displayed after you press the XMIT key.

```
.DATE  83/06/29  13:13:28  TYPE=B  RID=001  83/06/29  JDOE          <   30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*XX STATUS CODE: OR = ORDERED, SC = SCHEDULED, IP = IN PROCESS, SH = SHIPPED
*   XXXXXX STATUS DATE (YYMMDD)
*          XX INITIAL OF PERSON REPORTING STATUS
*             XXXXXXXXX PRODUCT TYPE NUMBER
*                       XXXXXX UNIT SERIAL NUMBER
*                              XXXXXX PRODUCTION COST
*                                     XXXXX CUSTOMER ORDER NUMBER
*                                           XXXX CUSTOMER CODE
*                    PRODUCTION PLAN DATE YYMMDD XXXXXX
*                         PRODUCTION DATE YYMMDD ACTUAL XXXXXX
*                                        SHIP DATE YYMMDD XXXXXX
*                                           ORDER TO SHIP NUMBER XXXXX
*                                                 SPECIAL SEARCH CODES XXX
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
                    ..... END REPORT .....
```

Figure 2–3. Contents of Report 1B

```
.DATE  83/07/05  10:47:50  TYPE=B  RID=002  83/06/29  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
 OR 741217 LS BLACKBOX9               98755 AMCO
 OR 741210 LS BLACKBOX9               98782 USSC
 IP 741217 LS BLACKBOX9 538993        84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787        82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287        84361 USSC 741230 741230
 SH 741204 LS BLACKBOX9 714577        64231 AMCO 741201 741203 741204 S8531
 SC 750110 LS BLACKBOX9 735481        97242 USSC 750116
 IP 741215 LS BLACKBOX9 836584        84382 FEDS 741215 741215
 OR 741210 LS GREENBOX1               96751 FEDS
 IP 741227 LS GREENBOX1 605126        84385 FEDS 741225 741227
 OR 741211 LS GREENBOX4               96652 ARCO
 IP 741216 LS GREENBOX4 436295        85381 USSC 741215 741216
 SC 750103 LS GREENBOX4 675411        87974 USSC 750103
 SC 750109 LS GREENBOX4 675484        97942 USSC 750109
 IP 741230 LS GREENBOX4 974085        84581 INTR 741228 741230
 OR 741210 LS GREENBOX5               99753 DICO
 SC 750110 LS GREENBOX6 674481        95964 FEDS 750130
 SH 741206 LS GREENBOX7 669624        54682 AMCO 741201 741205 741206 S8553
 OR 741228 LS GREENBOX8               94525 FEDS
 SC 750105 LS GREENBOX8 677481        97929 INTR 750105
 IP 741225 LS GREENBOX8 750933        86381 FEDS 741225 741225
 SC 750110 LS GREENBOX8 975481        99943 AMCO 750110
 OR 740310 LS GREENBOX9               99951 AMCO
                    ..... END REPORT .....
```

Figure 2–4. Contents of Report 2B

```
.DATE  83/06/29  13:07:49  TYPE=C  RID=001  83/06/29  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS .
*=========.=====.======.=======.========.=======.=====.========.==============.
 BLACKBOX1      A  13500   16875    23625 2362.50   100         1
 BLACKBOX2      A  13600   17000    23800 2380.00   110         2
 BLACKBOX3      A  13700   17125    23975 2397.50   120         4
 BLACKBOX4      B  13800   17250    24150 2415.00   130        10
 BLACKBOX5      B  13900   17375    24325 2432.50   140        50
 BLACKBOX6      C  14000   17500    24500 2450.00   150       100
 BLACKBOX7      C  14100   17625    24675 2467.50   160        10
 BLACKBOX8      D  14200   17750    24850 2485.00   170        20
 BLACKBOX9      D  14300   17875    25025 2502.50   180        40
 GREENBOX1      E  13700   17125    23975 2397.50   200        80
 GREENBOX2      E  13900   17375    24325 2432.50   210       160
 GREENBOX3      E  14100   17625    24675 2467.50   220         5
 GREENBOX4      F  14300   17875    25025 2502.50   230        15
 GREENBOX5      G  14500   18125    25375 2537.50   240        25
 GREENBOX6      H  14700   18375    25725 2572.50   250         1
 GREENBOX7      I  14900   18625    26075 2607.50   260         2
 GREENBOX8      J  15100   18875    26425 2642.50   270         3
 GREENBOX9      K  15300   19125    26775 2677.50   280         4
                      ..... END REPORT .....
```

Figure 2–5. Contents of Report 1C

```
.DATE  83/07/05  09:29:51  TYPE=D  RID=001  83/06/29  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER      .    ADDRESS     .      CITY     .STATE. ZIP .REMARK.
*==.======.========.===.=====.=======.========.======.====.==================.================.================.=====.=====.======.
 OR 99951S GREENBOX9   2 AMCO                  750312 DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS      LA 64301
 OR 99951S GREENBOX7   1 AMCO                  750312 DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS      LA 64301
 OR 99951S BLACKBOX9   1 AMCO                  750312 DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS      LA 64301
 OR 96652S GREENBOX4   2 ARCO                  750412 LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK         NY 33021
 OR 96652S BLACKBOX5   1 ARCO                  750412 LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK         NY 33021
 OR 96652S BLACKBOX4   1 ARCO                  750412 LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK         NY 33021
 OR 99753S GREENBOX5   1 DICO                  750312 LSJ  DIGITAL CORP      1782 NORTH ST   NEW YORK         NY 54002
 OR 94525S GREENBOX8   1 FEDS                  750312 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON       DC 20001
 OR 96751S GREENBOX1   1 FEDS                  750312 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON       DC 20001
 OR 99842S BLACKBOX8   1 FEDS                  750312 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON       DC 20001
 OR 99842S BLACKBOX0   1 FEDS                  750312 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON       DC 20001
 OR 99752S BLACKBOX4   1 INTR                  750312 LTR  INTERNATIONAL CO  3301 SUMMIT AV   CHICAGO         ILL 65320
 OR 98782S BLACKBOX9   1 USSC                  750312 SSF  UNION STEEL/SULFR 5430 ALCAN AVE   SEATTLE        WASH 73001
 OR 96755S GREENBOX9   1 USSC                  750312 SSF  UNION STEEL/SULFR 5430 ALCAN AVE   SEATTLE        WASH 73001
                    ..... END REPORT .....
```

Figure 2–6. Contents of Report 1D

3. What You Must Do before and after a MAPPER 80 Session

3.1. LOGGING ON TO THE OS/3 SYSTEM

Before you can use MAPPER 80 software, you must enter the OS/3 system with a process called logging on.

To log on using a terminal or remote workstation, you must first execute the $$SON command as soon as the modem or other communication device is ready to operate. The format is:

```
▷$$SON xxxxyyyy
```

where:

▷
Is the SOE character.

xxxxyyyy
Is the workstation identification name. The actual name varies for each user installation. For example, you might enter:

```
▷$$SON TRMIMPR8
```

When the $$SON command is processed by the computer, the OS/3 logo is displayed on the remote workstation or terminal screen (Figure 3–1).

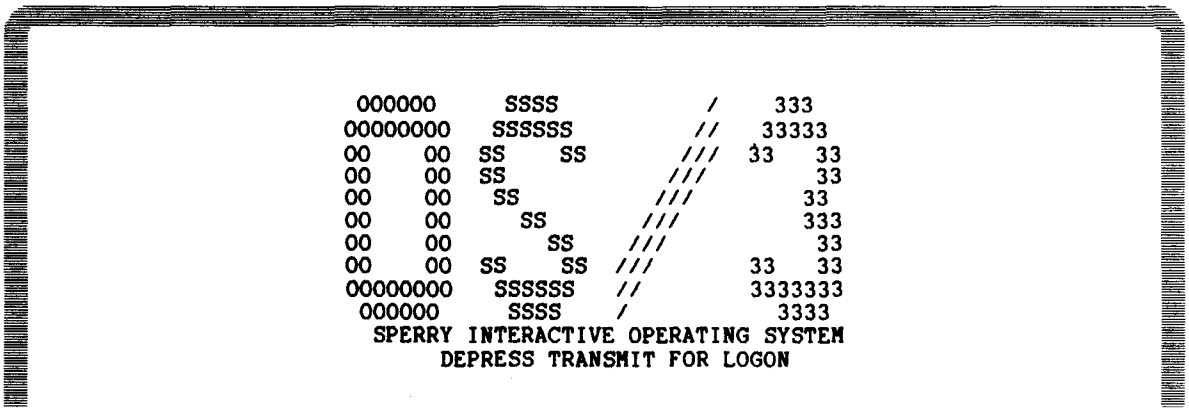


Figure 3–1. OS/3 Logo Screen

If you are using a local workstation, the OS/3 logo is automatically displayed when the system starts up.

Whether or not you are using a local workstation, remote workstation, or terminal, once the OS/3 logo is displayed, you can then use either of two methods to log on:

- Logon method 1

  1. Press the XMIT key.

  2. The logon screen appears as shown in Figure 3–2:

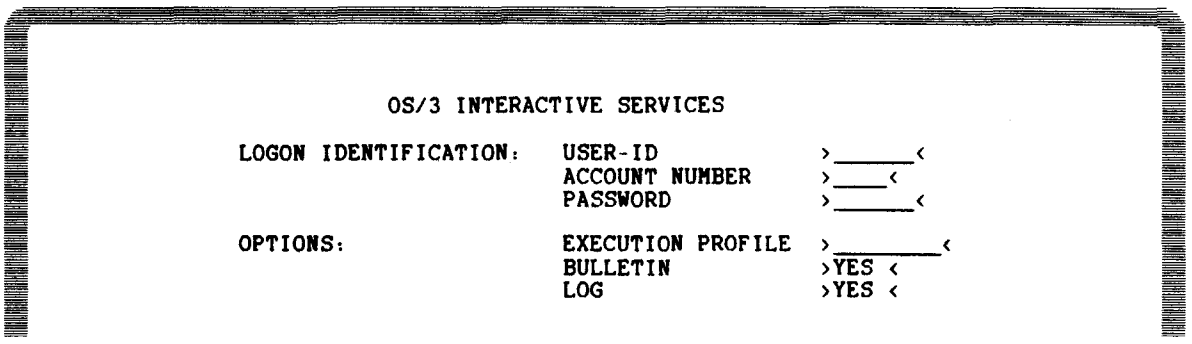


Figure 3–2. Logon Screen

  3. Key in the required parameters and press the XMIT key.

- Logon method 2

  1. Put the workstation in system mode by pressing the FUNCTION and SYS MODE key together for a workstation or press the MSG WAIT key for a terminal.

  2. Key in the following LOGON command:

     ```
     LOGON user id,dept,options
     ```

  3. Press the XMIT key.

NOTE:

The actual values of the parameters used in logon methods 1 and 2 are determined at each user's installation.

3.2. CONNECTING THE WORKSTATION TO THE MAPPER 80 JOB

After you log onto the system, you must link the workstation to the MAPPER 80 job using the CONNECT command; you cannot use the UID job control statement.

Format:

```
CONNECT job-name,workstation-name
```

where:

`job-name`
Is the MAPPER 80 job name used for each workstation.

`workstation-name`
Is the logical name under the MAPPER 80 job used for each workstation.

Example:

```
CONNECT MAPPER,WKST1
```

NOTE:

Do not use the CONNECT command when the MAPPER 80 job is in its start-up (initialization) process. Use of the CONNECT command at this time may impair use of the workstation for the duration of the MAPPER 80 session.

3.2.1. How to Use the CONNECT Command

To connect the workstation to MAPPER 80 software:

1. Put the workstation into system mode.

2. Key in the CONNECT command and press the XMIT key.

After you press the XMIT key, this MAPPER 80 IDLE logo screen appears (Figure 3–3):

```
                  ********************************
                  *  M A P P E R  8 0 ( 2.00 )   *
                  *                              *
                  *        < I D L E >           *
                  *                              *
                  *    WORK STATION   [ T01 ]    *
                  *         83 / 06 / 20         *
                  ********************************

 [ SIGN ON ]

        USER ID          ( ____________ )
        DEPARTMENT NO    ( ___ )
        PASSWORD         < ______ >

-------------------------------------------------------------
I     *** N O T E S ***                                     I
I       ( --- ) --- REQUIRED                                I
I       < --- > --- OPTIONAL                                I
-------------------------------------------------------------      S010
```

Figure 3–3. MAPPER 80 IDLE Logo

The MAPPER 80 IDLE logo indicates that the MAPPER 80 system is available. You use it to sign on to the MAPPER 80 system, as described in 3.3.

3.2.2. How to Connect Auxiliary Equipment (Printer)

Before you use the AUXILIARY (AUX) function (9.3), first execute the $$SON command (if you are using a remote workstation or terminal) and log on as described in 3.1 from the workstation connected to the auxiliary printer. Execute the CONNECT command as described in 3.2, but use the file name in the form WKSPn, instead of WKSTn, for example:

```
CONNECT MAPPER,WKSP1
```

When the CONNECT command is processed, the following screen (the auxiliary logo) is displayed. This indicates the auxiliary printer is available (Figure 3–4):

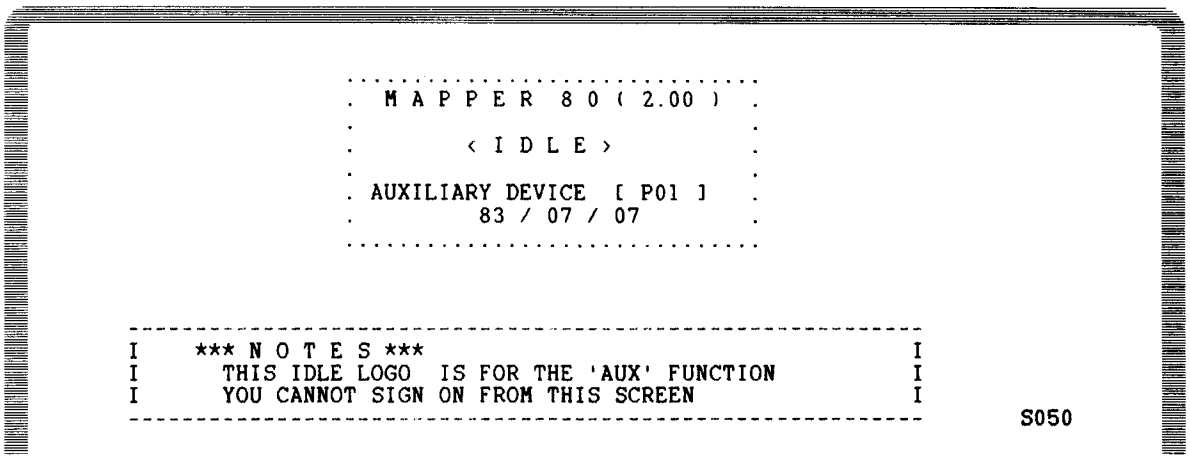
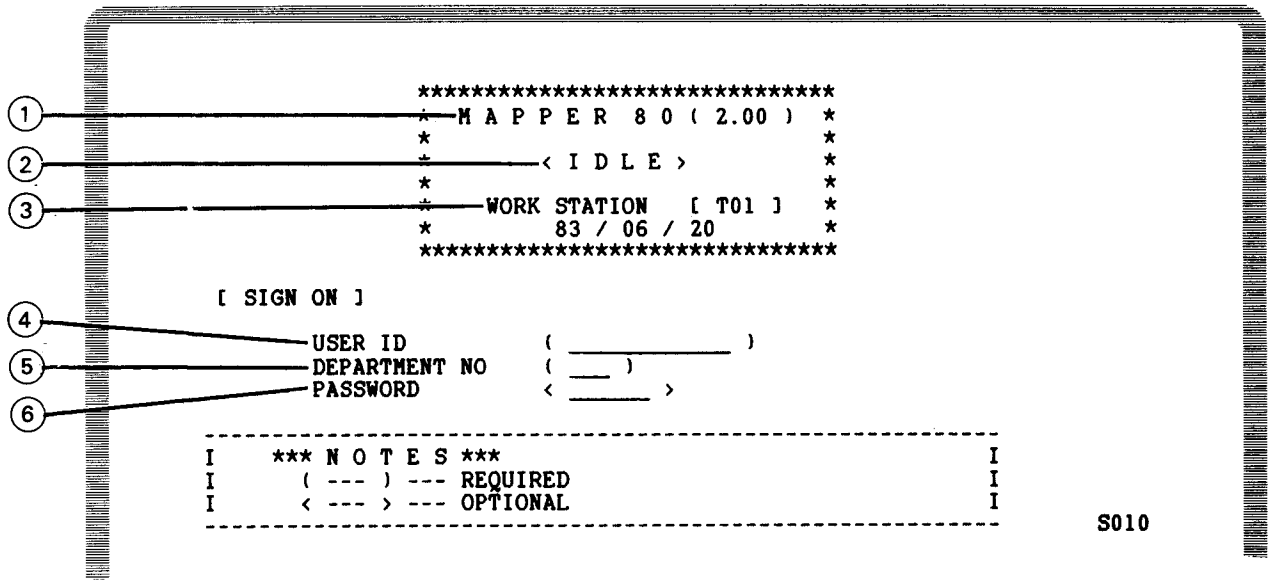


Figure 3–4. Auxiliary Logo

3.3. HOW TO SIGN ON TO THE MAPPER 80 SYSTEM

After you execute the CONNECT command, the MAPPER 80 IDLE logo is displayed on the workstation screen (Figure 3–5.):



NOTES:

(1) 2.00 indicates the MAPPER 80 software level.

(2) IDLE indicates no one is using the workstation.

(3) T01 is the workstation number.

(4) Is your identification name.

(5) Is your department number.

(6) Is your password.

Figure 3–5. Entries on the MAPPER 80 IDLE Logo

To sign on, key in your identification name, department number, and password (if required) in the underlined sections within the parentheses of the MAPPER 80 IDLE logo screen, and press the XMIT key. (Press the TAB FWD key to move the cursor from one field to the next.)

To use the training mode, key in JDOE in the user id field and 7 in the department field, leave the password field blank, and press the XMIT key. The completed screen is shown in Figure 3–6:

```
                  ********************************
                  *  M A P P E R  8 0 ( 2.00 )   *
                  *                              *
                  *        < I D L E >           *
                  *                              *
                  *    WORK STATION   [ T01 ]    *
                  *         83 / 06 / 20         *
                  ********************************

 [ SIGN ON ]

        USER ID          ( jdoe_______ )
        DEPARTMENT NO    ( 7_ )
        PASSWORD         < ______ >

-------------------------------------------------------------
I     *** N O T E S ***                                     I
I       ( --- ) --- REQUIRED                                I
I       < --- > --- OPTIONAL                                I
-------------------------------------------------------------
                                                        S010
```

Figure 3–6. MAPPER 80 IDLE Logo Screen Used to Enter Training Mode

After you transmit the entries in Figure 3–6, you are automatically in the training mode, and the user logo screen is displayed (Figure 3–7):

```
                  ********************************
                  *  M A P P E R  8 0 ( 2.00 )   *
                  *                              *
                  *    USER  [ JDOE          ]   *
                  *    D-NO. [ 007 ]             *
                  *    MODE  [ 102 ]             *
                  *    WORK STATION   [ T01 ]    *
                  *         83 / 06 / 20         *
                  ********************************

 [ ENTER FUNCTION REQUEST ]

        FUNCTION     ( ____ )
        PARAMETER    < ____________________________ >

                                                        S020
```

Figure 3–7. User Logo Screen in Training Mode

The user's identification name (JDOE), department number (007), and mode number (102) are displayed in the user logo.

NOTE:

The user's identification name (JDOE), the department number (007), and the mode number (102) of the training mode are the values given here, but they may change at different MAPPER 80 installations. If your values are different, the MAPPER 80 coordinator knows the values.

3.4. HOW TO SIGN OFF

When you finish a MAPPER 80 session, free the workstation using the sign off operation so that another MAPPER 80 user can use it.

To sign off, key in the letter X in the function name field on the user logo, and press the XMIT key. This is shown in Figure 3–8.

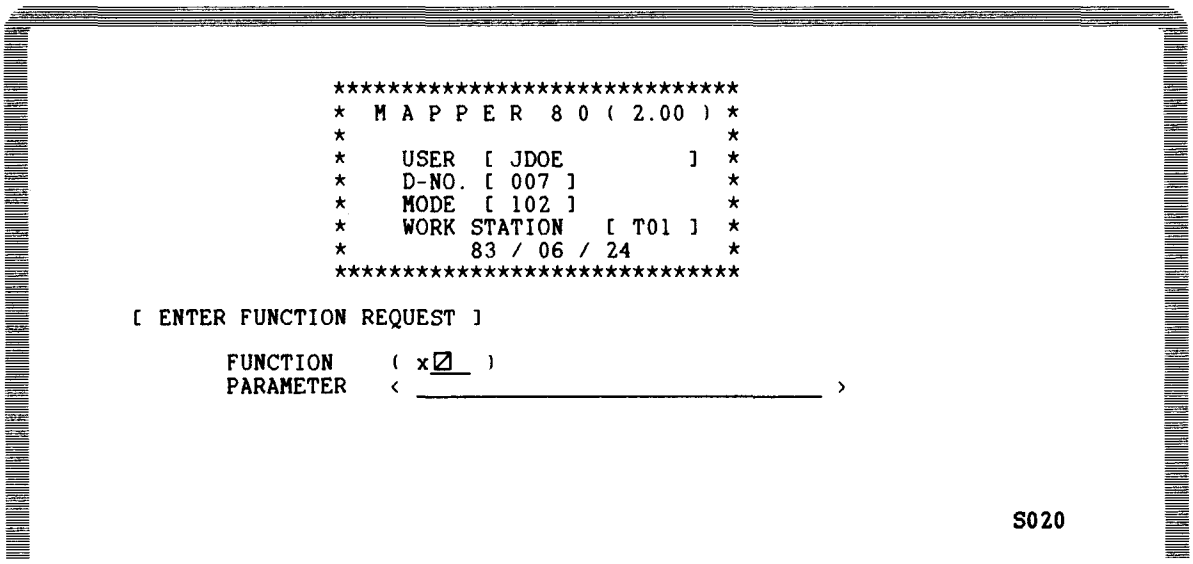


Figure 3–8. Completed User Logo Screen to Sign Off

After you press the XMIT key, the MAPPER 80 IDLE logo is once again displayed on the screen, and another MAPPER 80 user can use the workstation.

3.4.1. Alternate Sign-Off Methods

You can use two other methods to sign off:

1. While a report is displayed on the screen, key in an X in the position after the SOE mark in line 0 or in the home position, and press the XMIT key.

2. Key in an X in the function name field of the function request screen (Figure 3–9), and press the XMIT key.

3.5. DISCONNECTING THE WORKSTATION FROM THE MAPPER 80 JOB

After you sign off, the MAPPER 80 IDLE logo (Figure 3–5) is displayed. To disconnect the workstation from the MAPPER 80 system:

1. Put the workstation into system mode.

2. Key in FREE and press the XMIT key.

After you use the FREE command, the workstation is disconnected from MAPPER 80 system, but it is logged on to OS/3, so other interactive services are still available.

3.5.1. How to Disconnect Auxiliary Equipment (Printer)

To disconnect the auxiliary equipment, execute the FREE command (3.5) and log off the system (3.6). Execute the $$SOFF command when you use a remote workstation or terminal.

3.6. LOGGING OFF THE OS/3 SYSTEM

When you finish using the OS/3 system, signal to the system that you are finished by logging off. To log off:

1. Put the workstation into system mode.

2. Key in LOGOFF and press the XMIT key.

After you log off, the OS/3 logo screen is displayed (Figure 3–1).

This completes the disconnect operation for a local workstation, but you must complete two additional steps to disconnect a remote workstation or terminal:

1. Put the remote workstation or terminal into system mode.

2. Key in $$SOFF and press the XMIT key.

NOTE:

See Table 3–1 for a summary of the operations discussed in 3.1 through 3.6. For details on the messages and procedures discussed in 3.1 through 3.6, see the OS/3 workstation operations guide, UP–8910 (current version).

Table 3–1. Summary of Operations Used before and after a MAPPER 80 Session

Local Workstation	Terminal or Remote Workstation
	$$SON command
OS/3 logon	OS/3 logon
Connect command	Connect command
Sign-on	Sign-on
MAPPER 80 use	MAPPER 80 use
Sign-off	Sign-off
Disconnect (FREE command)	Disconnect (FREE command)
OS/3 logoff	OS/3 logoff
	$$SOFF command

3.7. FUNCTION SELECTION AND PARAMETER DESIGNATION

3.7.1. Where to Enter Functions

After you sign on to the MAPPER 80 system at a workstation, you can use all the manual functions. Each function has an assigned name that calls that function. These names are referred to as function names. To call a function, key in its function name in one of four locations and press XMIT. All four locations are equivalent to the MAPPER 80 software. You can key functions into:

1. The function name field on the user logo screen (see Figure 3–7)

   The user logo screen appears directly after you sign on and after designated functions are completed.

2. The function name field in the NEW FUNCTION REQUEST field of the currently displayed function screen (see Figure 3–9)

   Use this method to change functions.

3. Any control field after the SOE mark (▷) on line 0 (top line on the screen) when a report or result is displayed. (See Figure 3–12.)

4. The home position when a function mask is displayed. (See Figure 3–13.)

   Use this method to change functions when a function mask is displayed. A function mask is displayed after entering certain MAPPER 80 functions. It displays the format of fields in a report, and you use it to enter parameters that direct the operation of many MAPPER 80 functions. Figure 3–13 shows an example of a function mask.

3.7.2. The Formal Access Method – Using the Function Request Screen

The function request screen is displayed after you enter and transmit a function name using any of the four methods discussed in 3.7.1. Each function request screen provides you with:

- The function abbreviation
- Information about the parameters available with that function
- Input fields to key in appropriate parameters
- Input fields to terminate the current function and call another function

Figure 3–9 shows the function request screen for the DISPLAY function:

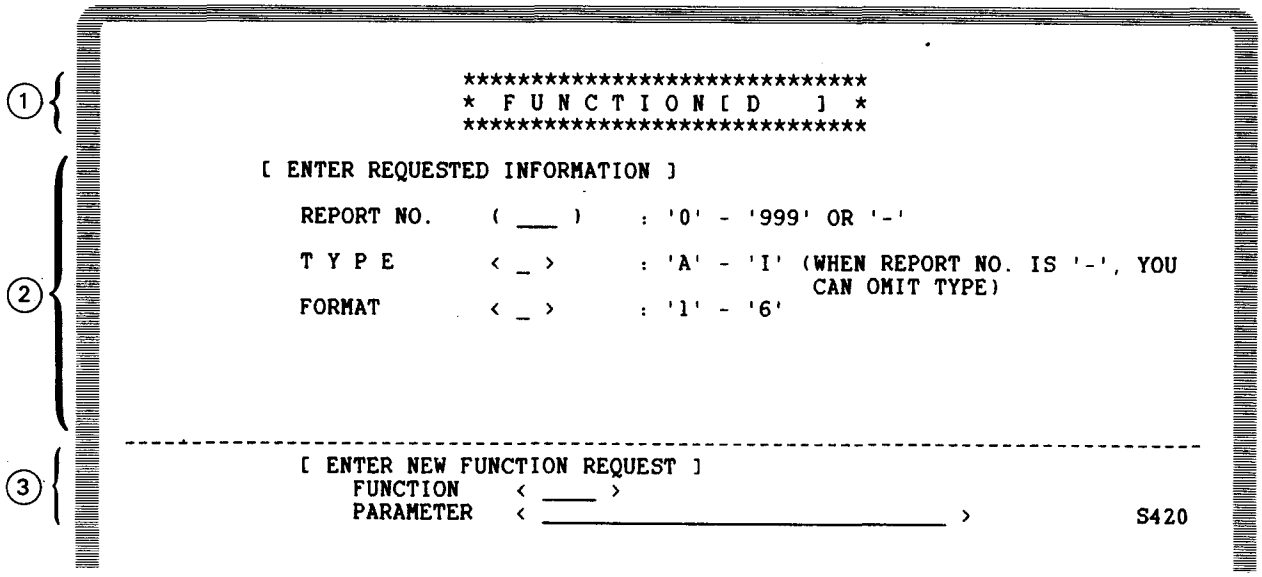


Figure 3–9. Entries on the Function Request Screen (Part 1 of 2)

NOTES:

(1) This line shows the function you selected.

(2) Use this section to key in parameters.

- You must specify fields enclosed in parentheses ( ).
- Fields enclosed between delimiters <> are optional.

(3) Use this section to change to another function. Key in the new function in the function field. Use the parameter field when using the fast access method discussed in 3.7.3.

Figure 3–9. Entries on the Function Request Screen (Part 2 of 2)

As you key in the entries in a function request screen, press the TAB FWD key to advance the cursor from one parameter field to the next. When you key in all the required parameters, press the XMIT key.

3.7.3. The Fast Access Method

You can enter functions using the formal access method or the fast access method. The fast access method lets you bypass the function request screen because you can directly key in a function and any parameters. You can use the fast access method freely except for the MATCH function (7.8). The formats for using this method are provided as each function is discussed, and they are listed in Table A–2.

3.7.3.1. How to Use the Fast Access Method

There are four ways to use the fast access method:

1. Key in the function name and the parameter in the user logo screen. In Figure 3–10, the function name is D and the parameter is 2B.

```
                  ********************************
                  *  M A P P E R  8 0 ( 2.00 ) *
                  *                              *
                  *    USER  [ JDOE          ]  *
                  *    D-NO. [ 007 ]            *
                  *    MODE  [ 102 ]            *
                  *    WORK STATION   [ T01 ]   *
                  *         83 / 06 / 24         *
                  ********************************

[ ENTER FUNCTION REQUEST ]

        FUNCTION     ( d___ )
        PARAMETER    < 2b_____________________________ >




                                                  S020
```

Figure 3–10. Fast Access Method Using the User Logo Screen

2. Key in the function name and the parameter in the function request screen. In Figure 3–11, the function name is D and the parameter is 2B.

```
                    ******************************
                    *  F U N C T I O N [ TOT  ]  *
                    ******************************

        [ ENTER REQUESTED INFORMATION ]

           REPORT NO.     ( ___ )     : '0' - '999' OR '-'

           T Y P E        < _ >       : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                                   CAN OMIT TYPE)
           FORMAT         < _ >       : '1' - '6'




------------------------------------------------------------------------------
           [ ENTER NEW FUNCTION REQUEST ]
               FUNCTION     < d___ >
               PARAMETER    < 2b_____________________________ >          S420
```

Figure 3–11. Fast Access Method Using the Function Request Screen

3. Key in the function name and parameters in line 0 when a report or result is displayed (Figure 3–12).

```
LINE▷ d 2b FMT▷ 1 RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE        <   20 LINES▷
. <<<  CORPORATE ORDER STATUS  >>>
*
*    CUSTOMER      .   ADDRESS      .      CITY     .STATE. ZIP .REMARK.
*================.==============.=============.=====.=====.======.
 AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 DIGITAL CORP      1782 NORTH ST   NEW YORK          NY 54002
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 INTERNATIONAL CO  3301 SUMMIT AV  CHICAGO          ILL 65320
 UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
 UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
                    ..... END REPORT .....
```

Figure 3–12. Fast Access Method Using Line 0

4. Key in the function name and parameter in the home position when a function mask is displayed (Figure 3–13).

```
d 2b∅
@
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
                        @
```

Figure 3–13. Fast Access Method Using the Home Position of a Mask

3.7.3.2. Statement Conventions for Fast Access Method

Information contained within braces represents mandatory entries. You must choose one of these entries. Information contained within brackets represents optional entries that (depending upon function use) you can include or omit.

For example, this is the fast access format for the DISPLAY function:

```
D {rt[,f]}
  {-[,f] }
```

Examples of valid entries using this format are:

```
D 2B,1
D 2B
D -,1
D -
```

4. Report Access Functions

You should be familiar with most of the functions in this section; they provide capabilities that range from accessing other mode types to displaying reports and previous results.

All functions in this manual are presented in summary form in Appendix A.

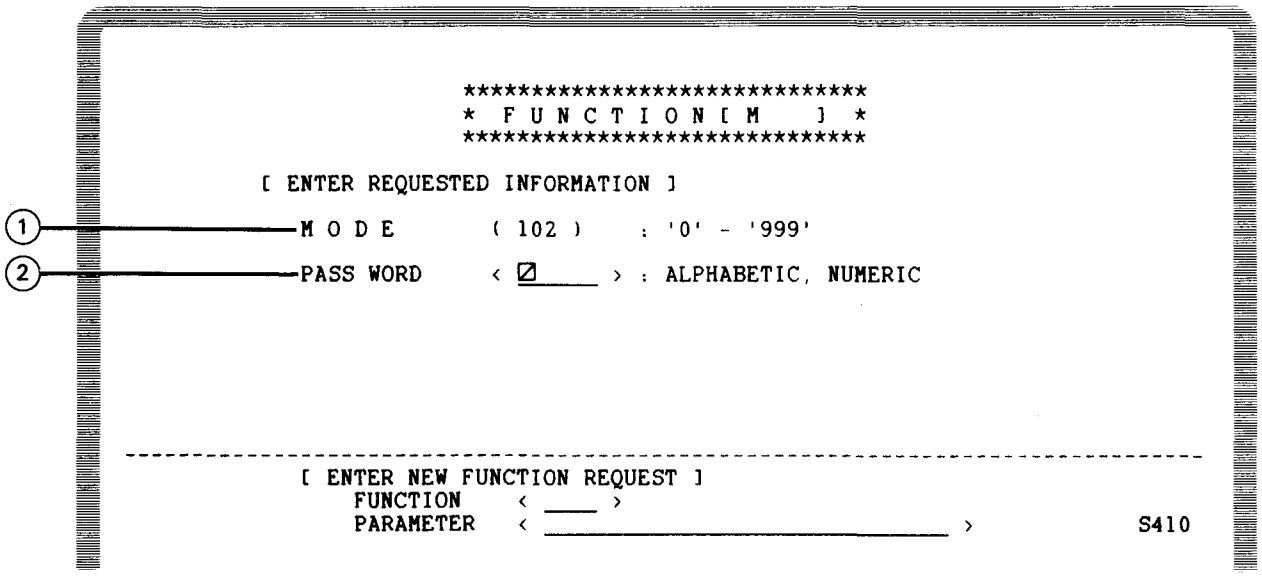
4.1. MODE FUNCTION (M)

To provide some level of organizational security for the MAPPER 80 data base, you are usually allowed to work in only one mode. If you need to use another mode, ask the MAPPER 80 coordinator to register additional modes for your user id. Use the MODE function after signing on to select a mode other than your default mode, providing your user id is authorized to access other modes and you know the password of the new mode, if one exists.

NOTE:

When JDOE is signed on, you can only use the self-training mode (102).

To call the MODE function, key in M and press the XMIT key. Figure 4–1 shows the MODE function request screen.



NOTES:

(1) The mode number of the mode used is keyed into this field.

(2) Each mode can have a password that is assigned by the MAPPER 80 coordinator, and it is keyed into this field.

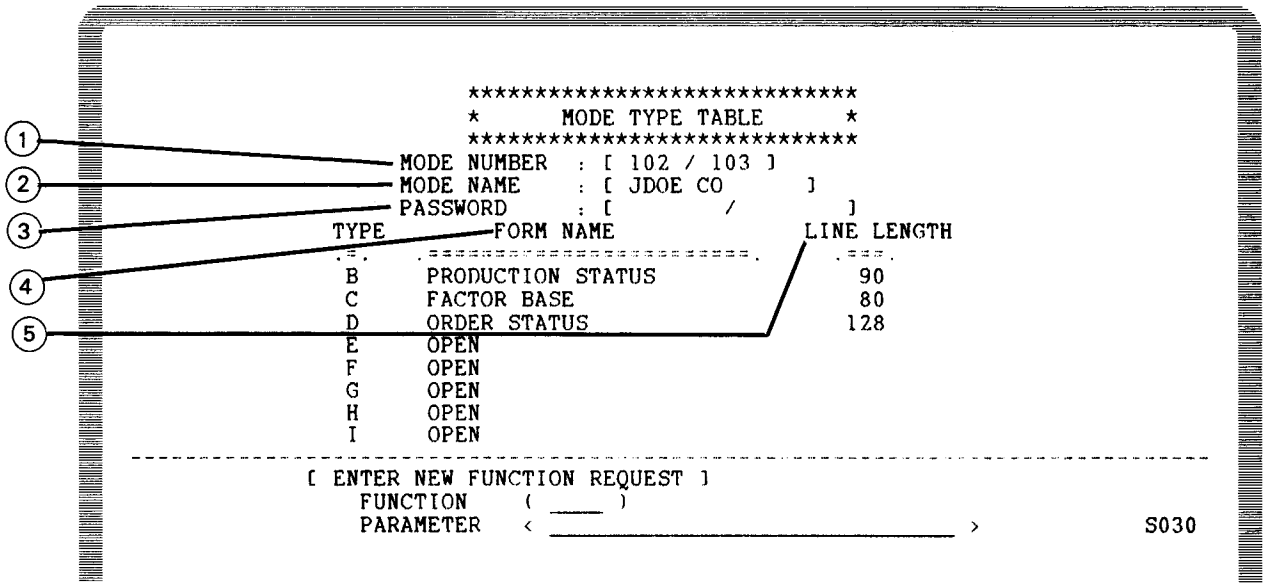
Figure 4–1. MODE Function Request Screen

After you transmit the entries made in Figure 4–1, the mode type table of the selected mode (Figure 4–2) is displayed on the screen.

4.2. TYPE FUNCTION (T)

The TYPE function displays the mode type table. This table lists the types of reports (B to I inclusive) within the mode you are accessing.

To call the type function, key in T and press the XMIT key. The mode type table is then displayed (Figure 4–2).



NOTES:

(1) Mode number takes the form even number/odd number.

(2) Mode name is the name given to the mode.

(3) Mode password is a section displaying the password assigned to the even mode, the odd mode, or both modes, but they are only available to the MAPPER 80 coordinator.

(4) Form name shows the name given to each type. OPEN is displayed for unused types.

(5) This is the line length of all reports within that type.

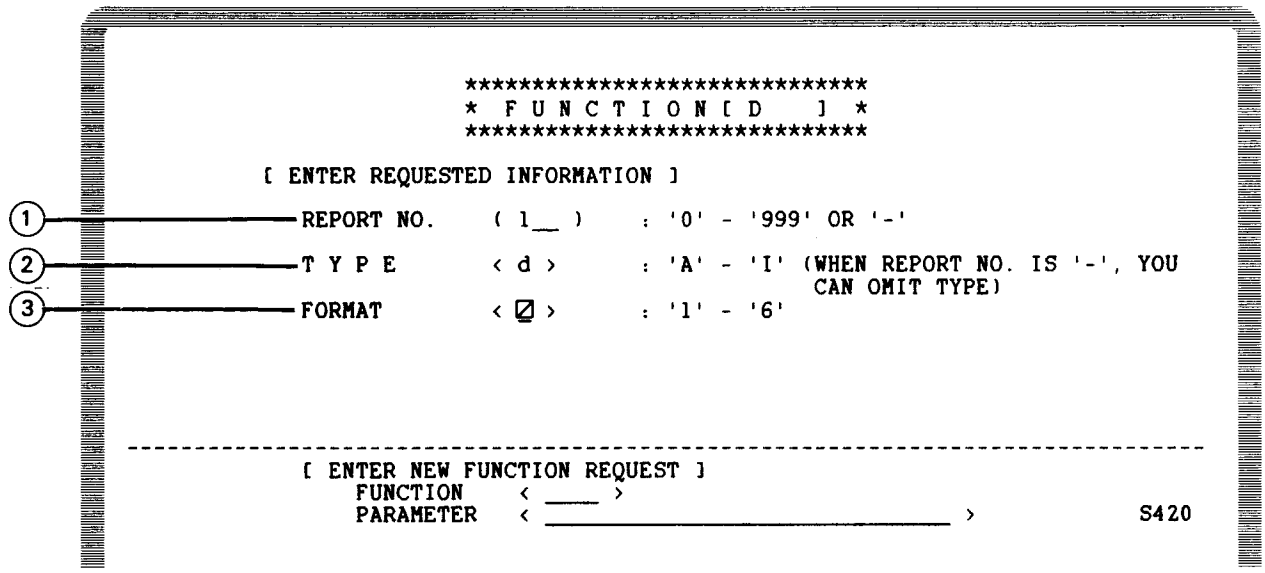
Figure 4–2. Mode Type Table

To call another function while the mode type table is displayed, key in the function name in the function name field in the lower part of the screen, and press the XMIT key.

4.3. DISPLAY FUNCTION (D)

The DISPLAY function displays reports on the workstation screen.

To call the DISPLAY function, key in D and press the XMIT key. The DISPLAY function request screen is shown in Figure 4–3.



NOTES:

(1) This is the RID number of the report to be displayed.

(2) This is the alphabetic form type of the report.

(3) This is the format of the report. When left blank, the displayed report is format 0.

Figure 4–3. DISPLAY Function Request Screen

In Figure 4–3, key in a 1 as the RID number in the report number field. Then, press the TAB FWD key to move the cursor to the type field. Key in a D in the type field. When you leave the format field blank, format 0 is used. When the screen is complete, press the XMIT key.

The fast access format for the DISPLAY function is:

```
D {rt[,f]}
  {-[,f] }
```

where:

r
: Is the RID number.

t
: Is the type.

f
: Is the format number.

`rt[,f]`
Specifies the report is not displayed.

`-[,f]`
Specifies the report is displayed.

Example:

To perform the operation in Figure 4–3, key in D 1D.

The result is the same for both methods.

The next screen displays report 1D:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE         <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                .
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER     .
*==.======.=========.===.====.========.========.======.====.================.==
 OR 99951S GREENBOX9   2 AMCO                    750312 DJR  AMERIAN OIL CO.   73
 OR 99951S GREENBOX7   1 AMCO                    750312 DJR  AMERIAN OIL CO.   73
 OR 99951S BLACKBOX9   1 AMCO                    750312 DJR  AMERIAN OIL CO.   73
 OR 96652S GREENBOX4   2 ARCO                    750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX5   1 ARCO                    750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX4   1 ARCO                    750412 LSJ  ARGENTINE CORP.   23
 OR 99753S GREENBOX5   1 DICO                    750312 LSJ  DIGITAL CORP      17
 OR 94525S GREENBOX8   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 96751S GREENBOX1   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX8   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX0   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 99752S BLACKBOX4   1 INTR                    750312 LTR  INTERNATIONAL CO  33
 OR 98782S BLACKBOX9   1 USSC                    750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9   1 USSC                    750312 SSF  UNION STEEL/SULFR 54
                    ..... END REPORT .....
```

4.4. RELEASE FUNCTION (∧)

The RELEASE function erases the data currently displayed on the screen and returns the screen to the status immediately following sign-on (that is, the user logo is displayed).

To call this function, key in ∧ (the caret character) and press the XMIT key. This is shown in Figure 4–4.

```
LINE▸ ^     FMT▸    RL▸        SHFT▸       HLD CHR▸    HLD LN▸    PSWD▸            ▸
.DATE  83/06/20  15:23:42  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.   TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767         84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768         84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071         84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327         54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324         54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367         52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581         89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7                99842 FEDS
 OR 741227 LS BLACKBOX7                99725 INTR
 SC 750108 LS BLACKBOX7 665481         97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597         84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627         44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581         84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8                92788 FEDS
```

Figure 4–4. Using the RELEASE Function

The RELEASE function displays the user logo. The user logo displays information, including your name and mode. In Figure 4–5, the user JDOE is currently logged on to mode 102:

```
                    ********************************
                    *  M A P P E R  8 0 ( 2.00 ) *
                    *                              *
                    *    USER  [ JDOE          ]  *
                    *    D-NO. [ 007 ]            *
                    *    MODE  [ 102 ]            *
                    *    WORK STATION   [ T01 ]   *
                    *         83 / 06 / 24         *
                    ********************************

[ ENTER FUNCTION REQUEST ]

        FUNCTION    ( ____ )
        PARAMETER   < ____________________________ >


                                                          S020
```

Figure 4–5. User Logo Screen after Using the RELEASE Function

4.5. PREVIOUS RESULT DISPLAY FUNCTION (PRED)

The PREVIOUS RESULT DISPLAY function redisplays the result previous to the one on the current screen. This function is especially useful when you want to use the contents of the previous result to verify the contents of the present result. In addition, you can use the redisplayed result as input to other functions.

To call this function, key in PRED and press the XMIT key.

5. How to Use Line 0 for Report Positioning

5.1. INTRODUCTION

MAPPER 80 reports have a basic format, and you can create up to six variations of the basic report format (2.3.2). If the basic format or any variation of it are physically too wide (longer than 80 columns) for complete display on a workstation screen, you can display the undisplayed portion (columns 81 to 132) by using the SHFT function of line 0. Line 0 also lets you display selected data and formats. The uses of line 0 are discussed in the following section.

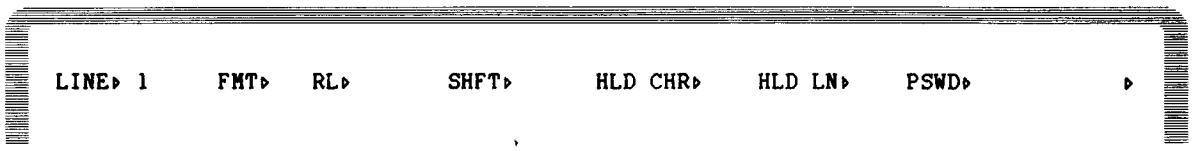
NOTE:

To use line 0 for redisplaying data that is erased due to an error or system messages during a MAPPER 80 session, see 2.3.4 and 2.3.5.

5.2. POSITIONING REPORTS (LINE 0)

Use the control line to position your report vertically and horizontally on the workstation screen.

The following is a typical control line. Each of the fields is called a control position except the last, which is used for password functions and as a result indicator.



where:

LINE
: Is the number of the first nonheld line on the screen.

FMT
: Is the number of the predefined format for the report. A blank indicates that the basic format is on display.

RL
Is the number of lines to roll the report up (blank or +) or down (–). Transmitting with no quantity specified rolls the display one full screen (23 lines).

SHFT
Is the number of characters to shift the report left (blank or +) or right (–) on the screen. Transmitting with no quantity specified shifts the display one screen (79 characters). The first character is always fixed.

HLD CHR
Is the number of characters held on the left side of the screen.

HLD LN
Is the number of lines held at the top of the screen.

PSWD
Is used to set, change, or erase a report password. The following appears in this field when applicable:

RESULT
Indicates that the display on the screen is a result.

UPRESULT
Indicates that the display on the screen is an update result of a SEARCH UPDATE or MATCH UPDATE function.

5.2.1. Line Position (LINE)

The LINE control position indicates the number of the first data line on the screen. To go to a specific line in a report, enter the specific line number in the LINE position and press the XMIT key. This displays another screen containing your specified line as the first line below the control line or any held lines.

To go to the last line in a report, enter a number that is larger than the report size, e.g., 999, and transmit. To return to line 1, enter a 1 in the LINE position and press the XMIT key.

5.2.2. Displaying Report Formats (FMT)

You can display your report in any of the up to six formats defined in RID 0 of the same form type. RID 0 is a control RID generated by the MAPPER 80 coordinator. With the defined formats, you can selectively display fields of data. This is especially useful for displaying reports with data lines longer than 80 characters.

If you do not specify a format when you display a report, the request assumes the basic format of the form type. The basic format is the leftmost 80 characters of a report. Whenever a report is on display, the format displayed appears in the FMT control position, as follows:

Blank	1–6
Basic format	Formats 1 through 6

When you specify an undefined format, the date line, report title line, and the first column of the remaining lines of RID 0 of that form type are displayed.

To select a format, display a report, press the TAB key to move the cursor to the FMT control position, and enter a format number. After report 1D is displayed, format 1 is keyed into the FMT control position in Figure 5–1.

```
LINE▷ 1     FMT▷ 1 RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE         <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                .
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER     .
*==.======.========.===.====.=======.=======.======.====.================.==
 OR 99951S GREENBOX9   2 AMCO                    750312 DJR  AMERIAN OIL CO.   73
 OR 99951S GREENBOX7   1 AMCO                    750312 DJR  AMERIAN OIL CO.   73
 OR 99951S BLACKBOX9   1 AMCO                    750312 DJR  AMERIAN OIL CO.   73
 OR 96652S GREENBOX4   2 ARCO                    750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX5   1 ARCO                    750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX4   1 ARCO                    750412 LSJ  ARGENTINE CORP.   23
 OR 99753S GREENBOX5   1 DICO                    750312 LSJ  DIGITAL CORP      17
 OR 94525S GREENBOX8   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 96751S GREENBOX1   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX8   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX0   1 FEDS                    750312 PLR  FED SYSTEMS CORP  15
 OR 99752S BLACKBOX4   1 INTR                    750312 LTR  INTERNATIONAL CO  33
 OR 98782S BLACKBOX9   1 USSC                    750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9   1 USSC                    750312 SSF  UNION STEEL/SULFR 54
                     ..... END REPORT .....
```

Figure 5–1. Using FMT Control Position to Change Formats

The report in Figure 5–1 is wider than 80 characters. Note that the start of the customer addresses is on the right side of the screen.

Press the XMIT key to display the report in format 1 (Figure 5–2):

```
LINE▷ 1     FMT▷ 1 RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE        <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*
*    CUSTOMER     .   ADDRESS     .      CITY     .STATE. ZIP .REMARK.
*================.===============.==============.=====.=====.======.
 AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 DIGITAL CORP      1782 NORTH ST   NEW YORK          NY 54002
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 INTERNATIONAL CO  3301 SUMMIT AV  CHICAGO          ILL 65320
 UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
 UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
                     ..... END REPORT .....
```

Figure 5–2. Display of Format 1

Format 1 contains all the customer addresses, some of which were off the screen when you specified no format.

Other formats display the report with the fields in the same order, but with different fields omitted. Figure 5–3 shows the display of format 2; note that the format number always appears in the FMT control position.

```
LINE▷ 1     FMT▷ 2 RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/07/05  09:29:51  TYPE=D  RID=001  83/06/29  JDOE        <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER .  PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.
*CD.NUMBER.   TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .
*==.======.=========.===.====.========.========.======.====.
 OR 99951S GREENBOX9   2 AMCO                    750312 DJR
 OR 99951S GREENBOX7   1 AMCO                    750312 DJR
 OR 99951S BLACKBOX9   1 AMCO                    750312 DJR
 OR 96652S GREENBOX4   2 ARCO                    750412 LSJ
 OR 96652S BLACKBOX5   1 ARCO                    750412 LSJ
 OR 96652S BLACKBOX4   1 ARCO                    750412 LSJ
 OR 99753S GREENBOX5   1 DICO                    750312 LSJ
 OR 94525S GREENBOX8   1 FEDS                    750312 PLR
 OR 96751S GREENBOX1   1 FEDS                    750312 PLR
 OR 99842S BLACKBOX8   1 FEDS                    750312 PLR
 OR 99842S BLACKBOX0   1 FEDS                    750312 PLR
 OR 99752S BLACKBOX4   1 INTR                    750312 LTR
 OR 98782S BLACKBOX9   1 USSC                    750312 SSF
 OR 96755S GREENBOX9   1 USSC                    750312 SSF
                     ..... END REPORT .....
```

Figure 5–3. Display of Format 2

Figure 5–4 is the display of format 3:

```
LINE▷ 1     FMT▷ 3ØRL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ORDER .CUST.SALE.
*NUMBER.CODE.REP .    CUSTOMER      .    ADDRESS      .      CITY     .STATE. ZIP
*======.====.====.================.==============.==============.=====.=====
 99951S AMCO DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 99951S AMCO DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 99951S AMCO DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 96652S ARCO LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 96652S ARCO LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 96652S ARCO LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 99753S DICO LSJ  DIGITAL CORP      1782 NORTH ST   NEW YORK          NY 54002
 94525S FEDS PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 96751S FEDS PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 99842S FEDS PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 99842S FEDS PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 99752S INTR LTR  INTERNATIONAL CO  3301 SUMMIT AV  CHICAGO          ILL 65320
 98782S USSC SSF  UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
 96755S USSC SSF  UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
                     ..... END REPORT .....
```

Figure 5–4. Display of Format 3

Figure 5–5 is the display of format 4:

```
LINE▷ 1     FMT▷ 4ØRL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*SALE.
*REP .    CUSTOMER      .    ADDRESS      .      CITY     .STATE. ZIP .REMARK.
*====.================.==============.==============.=====.=====.======.
 DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 DJR  AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 LSJ  ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 LSJ  DIGITAL CORP      1782 NORTH ST   NEW YORK          NY 54002
 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 PLR  FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 LTR  INTERNATIONAL CO  3301 SUMMIT AV  CHICAGO          ILL 65320
 SSF  UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
 SSF  UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
                     ..... END REPORT .....
```

Figure 5–5. Display of Format 4

Figure 5–6 is the display of format 5:

```
LINE▷ 1     FMT▷ 5ØRL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE        <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ODR.CUST.                .              .              .          .
*CD.QTY.CODE.    CUSTOMER    .   ADDRESS    .      CITY    .STATE. ZIP
*==.===.====.================.==============.=============.=====.=====
 OR    2 AMCO AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 OR    1 AMCO AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 OR    1 AMCO AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 OR    2 ARCO ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 OR    1 ARCO ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 OR    1 ARCO ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 OR    1 DICO DIGITAL CORP      1782 NORTH ST   NEW YORK          NY 54002
 OR    1 FEDS FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR    1 FEDS FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR    1 FEDS FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR    1 FEDS FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR    1 INTR INTERNATIONAL CO  3301 SUMMIT AV  CHICAGO          ILL 65320
 OR    1 USSC UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
 OR    1 USSC UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
                     ..... END REPORT .....
```

Figure 5–6. Display of Format 5

5.2.3. Rolling (RL)

The RL control position allows you to roll through a report (move vertically through the data in a report). You can roll a report forward or backward.

Enter a plus sign (+) or make no entry in the RL position to roll the report forward 23 lines. Enter a minus sign (–) to roll the report backward 23 lines. Enter a signed or unsigned numeric entry to roll the report the specified number of lines. Once you establish roll direction, subsequent transmitting rolls the display in the same direction.

The LINE position value reflects the number of the first nonheld line on the screen and changes automatically with each roll. If you roll to the last line of the report, a minus sign appears in the RL control position (Figure 5–7) and the next roll is backward. The following example uses report 1B.

```
LINE▷ 8     FMT▷   RL▷ -☑   SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
*          XX INITIAL OF PERSON REPORTING STATUS
*             XXXXXXXXX PRODUCT TYPE NUMBER
*                       XXXXXX UNIT SERIAL NUMBER
*                              XXXXXX PRODUCTION COST
*                                     XXXXX CUSTOMER ORDER NUMBER
*                                           XXXX CUSTOMER CODE
*                    PRODUCTION PLAN DATE YYMMDD XXXXXX
*                         PRODUCTION DATE YYMMDD ACTUAL XXXXXX
*                                              SHIP DATE YYMMDD XXXXXX
*                                                 ORDER TO SHIP NUMBER XXXXX
*                                                       SPECIAL SEARCH CODES XXX
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
                    ..... END REPORT .....
```

Figure 5–7. Minus Sign in RL Control Position Indicating a Backward Roll the Next Time You Press the XMIT Key

5.2.4. Column Shifting (SHFT)

The SHFT control position allows you to display other than the first 80 characters of a line.

Horizontal, or column, shifting within a report means moving the screen left or right along the displayed lines of data. Positive movement shifts characters off the left side of the nonheld screen; negative movement shifts characters off the right side. The screen always displays 80 columns, displaying blanks after the last column of the report. The line type character in column 1 does not shift. Free form comment (.) lines do not shift.

To move columns numbered higher than 80 into the display, enter a positive number in the SHFT control position. Enter a negative number if you want to shift back to lower-numbered columns, but only to the point where column 1 of the report is in column 1 of the display screen.

To move one full screen (79 characters) onto the right side of the screen, enter a plus sign (+) or nothing. To move one full screen (79 characters) onto the left side of the screen, enter a minus sign (–).

In Figure 5–8, 10 is in the SHFT control position.

```
LINE▷ 1     FMT▷    RL▷        SHFT▷ 10☑ HLD CHR▷     HLD LN▷     PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER .  PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                .
*CD.NUMBER.   TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER     .
*==.======.=========.===.====.========.========.======.====.================.==
 OR 99951S GREENBOX9    2 AMCO                   750312 DJR  AMERIAN OIL CO.   73
 OR 99951S GREENBOX7    1 AMCO                   750312 DJR  AMERIAN OIL CO.   73
 OR 99951S BLACKBOX9    1 AMCO                   750312 DJR  AMERIAN OIL CO.   73
 OR 96652S GREENBOX4    2 ARCO                   750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX5    1 ARCO                   750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX4    1 ARCO                   750412 LSJ  ARGENTINE CORP.   23
 OR 99753S GREENBOX5    1 DICO                   750312 LSJ  DIGITAL CORP      17
 OR 94525S GREENBOX8    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 96751S GREENBOX1    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX8    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX0    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 99752S BLACKBOX4    1 INTR                   750312 LTR  INTERNATIONAL CO  33
 OR 98782S BLACKBOX9    1 USSC                   750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9    1 USSC                   750312 SSF  UNION STEEL/SULFR 54
                    ..... END REPORT .....
```

Figure 5–8. Using the SHFT Control Position for Horizontal Shifting

After you press the XMIT key, the screen in Figure 5–9 is displayed. This screen displays the data lines with the first 10 columns moved off the left side and the next 10 columns shifted onto the screen from the right-hand side. Note that the asterisk type column heading lines are also shifted, but that lines 1 and 2, which are period type lines, are not shifted.

```
LINE▷ 1     FMT▷    RL▷        SHFT▷☑    HLD CHR▷     HLD LN▷     PSWD▷          ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
* PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                .
*  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER     .   ADDRESS
*=========.===.====.========.========.======.====.================.===========
 GREENBOX9    2 AMCO                   750312 DJR  AMERIAN OIL CO.   7300 CENTRAL
 GREENBOX7    1 AMCO                   750312 DJR  AMERIAN OIL CO.   7300 CENTRAL
 BLACKBOX9    1 AMCO                   750312 DJR  AMERIAN OIL CO.   7300 CENTRAL
 GREENBOX4    2 ARCO                   750412 LSJ  ARGENTINE CORP.   2300 5TH AVE
 BLACKBOX5    1 ARCO                   750412 LSJ  ARGENTINE CORP.   2300 5TH AVE
 BLACKBOX4    1 ARCO                   750412 LSJ  ARGENTINE CORP.   2300 5TH AVE
 GREENBOX5    1 DICO                   750312 LSJ  DIGITAL CORP      1782 NORTH S
 GREENBOX8    1 FEDS                   750312 PLR  FED SYSTEMS CORP  1566 COLUMBI
 GREENBOX1    1 FEDS                   750312 PLR  FED SYSTEMS CORP  1566 COLUMBI
 BLACKBOX8    1 FEDS                   750312 PLR  FED SYSTEMS CORP  1566 COLUMBI
 BLACKBOX0    1 FEDS                   750312 PLR  FED SYSTEMS CORP  1566 COLUMBI
 BLACKBOX4    1 INTR                   750312 LTR  INTERNATIONAL CO  3301 SUMMIT
 BLACKBOX9    1 USSC                   750312 SSF  UNION STEEL/SULFR 5430 ALCAN A
 GREENBOX9    1 USSC                   750312 SSF  UNION STEEL/SULFR 5430 ALCAN A
                    ..... END REPORT .....
```

Figure 5–9. Display of Shifted Report

5.2.5. Holding Characters (HLD CHR)

The HLD CHR control position holds columns of characters on the left side of the screen. Enter the number of characters you want held in the HLD CHR control position and press the XMIT key. The number of characters you specify are held on the left side of the screen. If you wish, you can now shift the remaining columns, i.e., those columns that do not contain these held characters.

In Figure 5–10, 10 is in the HLD CHR position.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷ 10ØHLD LN▷    PSWD▷           ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER .  PRODUCT  .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                .
*CD.NUMBER.   TYPE    .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER     .
*==.======.========.===.====.========.========.======.====.================.==
 OR 99951S GREENBOX9    2 AMCO                   750312 DJR  AMERIAN OIL CO.   73
 OR 99951S GREENBOX7    1 AMCO                   750312 DJR  AMERIAN OIL CO.   73
 OR 99951S BLACKBOX9    1 AMCO                   750312 DJR  AMERIAN OIL CO.   73
 OR 96652S GREENBOX4    2 ARCO                   750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX5    1 ARCO                   750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX4    1 ARCO                   750412 LSJ  ARGENTINE CORP.   23
 OR 99753S GREENBOX5    1 DICO                   750312 LSJ  DIGITAL CORP      17
 OR 94525S GREENBOX8    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 96751S GREENBOX1    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX8    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX0    1 FEDS                   750312 PLR  FED SYSTEMS CORP  15
 OR 99752S BLACKBOX4    1 INTR                   750312 LTR  INTERNATIONAL CO  33
 OR 98782S BLACKBOX9    1 USSC                   750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9    1 USSC                   750312 SSF  UNION STEEL/SULFR 54
                     ..... END REPORT .....
```

Figure 5–10. Using HLD CHR Position to Specify the Number of Characters to Hold

After you press the XMIT key, the first 10 characters in each line are held at the left side of the screen (Figure 5–11). Note that the HLD CHR control position indicates 10. This means that you are holding 10 characters on the left side of the screen. The cursor appears in the SHFT control position in preparation for the next operation – shifting.

```
LINE▷ 1     FMT▷    RL▷       SHFT▷ ☑    HLD CHR▷ 10 HLD LN▷    PSWD▷           ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                  .
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER      .
*==.======.=========.===.====.========.========.======.====.================.==
 OR 99951S GREENBOX9   2 AMCO                  750312 DJR  AMERIAN OIL CO.   73
 OR 99951S GREENBOX7   1 AMCO                  750312 DJR  AMERIAN OIL CO.   73
 OR 99951S BLACKBOX9   1 AMCO                  750312 DJR  AMERIAN OIL CO.   73
 OR 96652S GREENBOX4   2 ARCO                  750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX5   1 ARCO                  750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX4   1 ARCO                  750412 LSJ  ARGENTINE CORP.   23
 OR 99753S GREENBOX5   1 DICO                  750312 LSJ  DIGITAL CORP      17
 OR 94525S GREENBOX8   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 96751S GREENBOX1   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX8   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX0   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 99752S BLACKBOX4   1 INTR                  750312 LTR  INTERNATIONAL CO  33
 OR 98782S BLACKBOX9   1 USSC                  750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9   1 USSC                  750312 SSF  UNION STEEL/SULFR 54
                    ..... END REPORT .....
```

Figure 5–11. Display of Held Characters Prior to Shifting

Enter the number of characters you want to shift in the SHFT control position. In Figure 5–12, 49 characters are specified for shifting.

```
LINE▷ 1     FMT▷    RL▷       SHFT▷ 49☑  HLD CHR▷ 10 HLD LN▷    PSWD▷           ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE          <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.                  .
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER      .
*==.======.=========.===.====.========.========.======.====.================.==
 OR 99951S GREENBOX9   2 AMCO                  750312 DJR  AMERIAN OIL CO.   73
 OR 99951S GREENBOX7   1 AMCO                  750312 DJR  AMERIAN OIL CO.   73
 OR 99951S BLACKBOX9   1 AMCO                  750312 DJR  AMERIAN OIL CO.   73
 OR 96652S GREENBOX4   2 ARCO                  750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX5   1 ARCO                  750412 LSJ  ARGENTINE CORP.   23
 OR 96652S BLACKBOX4   1 ARCO                  750412 LSJ  ARGENTINE CORP.   23
 OR 99753S GREENBOX5   1 DICO                  750312 LSJ  DIGITAL CORP      17
 OR 94525S GREENBOX8   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 96751S GREENBOX1   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX8   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 99842S BLACKBOX0   1 FEDS                  750312 PLR  FED SYSTEMS CORP  15
 OR 99752S BLACKBOX4   1 INTR                  750312 LTR  INTERNATIONAL CO  33
 OR 98782S BLACKBOX9   1 USSC                  750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9   1 USSC                  750312 SSF  UNION STEEL/SULFR 54
                    ..... END REPORT .....
```

Figure 5–12. Specifying the Number of Shift Characters

Press the XMIT key.

Figure 5–13 shows the report after shifting is performed. Starting with column 11, the report is shifted 49 columns to the left. The CUSTOMER field and all data to the right move over to the previously held characters.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷ ☑    HLD CHR▷ 10 HLD LN▷    PSWD▷           ▷
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE        <   20 LINES>
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER .                .                .              .      .      .
*CD.NUMBER.    CUSTOMER    .   ADDRESS      .      CITY    .STATE. ZIP .REMARK.
*==.======.================.==============.==============.=====.=====.======.
 OR 99951S AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 OR 99951S AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 OR 99951S AMERIAN OIL CO.   7300 CENTRAL AV NEW ORLEANS       LA 64301
 OR 96652S ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 OR 96652S ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 OR 96652S ARGENTINE CORP.   2300 5TH AVE    NEW YORK          NY 33021
 OR 99753S DIGITAL CORP      1782 NORTH ST   NEW YORK          NY 54002
 OR 94525S FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR 96751S FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR 99842S FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR 99842S FED SYSTEMS CORP  1566 COLUMBIA   WASHINGTON        DC 20001
 OR 99752S INTERNATIONAL CO  3301 SUMMIT AV  CHICAGO          ILL 65320
 OR 98782S UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
 OR 96755S UNION STEEL/SULFR 5430 ALCAN AVE  SEATTLE         WASH 73001
                     ..... END REPORT .....
```

Figure 5–13. Display of Shifted Report with Held Characters

5.2.6. Holding Lines (HLD LN)

The HLD LN control position lets you hold specified lines in a report at the top of the screen while positioning the report. This is especially useful for holding field headers at the top of the screen when you roll through an unfamiliar report.

To hold five lines, display a report and enter 5 in the HLD LN control position, as shown in Figure 5–14.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷ 5☑PSWD▷          ▷
.DATE  83/06/10  16:30:46  TYPE=B  RID=001  82/12/23  JDOE         <   30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*XX STATUS CODE: OR = ORDERED, SC = SCHEDULED, IP = IN PROCESS, SH = SHIPPED
*   XXXXXX STATUS DATE (YYMMDD)
*          XX INITIAL OF PERSON REPORTING STATUS
*             XXXXXXXXX PRODUCT TYPE NUMBER
*                       XXXXXX UNIT SERIAL NUMBER
*                              XXXXXX PRODUCTION COST
*                                     XXXXX CUSTOMER ORDER NUMBER
*                                           XXXX CUSTOMER CODE
*                     PRODUCTION PLAN DATE YYMMDD XXXXXX
*                          PRODUCTION DATE YYMMDD ACTUAL XXXXXX
*                                            SHIP DATE YYMMDD XXXXXX
*                                               ORDER TO SHIP NUMBER XXXXX
*                                                     SPECIAL SEARCH CODES XXX
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
```

Figure 5–14. How to Specify the Number of Lines to Hold

Press the XMIT key to display the screen in Figure 5–15. Note that the number 6 appears in the LINE control position – the sixth line is the first nonheld data line on the screen:

```
LINE▷ 6☑    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷ 5  PSWD▷          ▷
.DATE  83/06/10  16:30:46  TYPE=B  RID=001  82/12/23  JDOE         <   30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*XX STATUS CODE: OR = ORDERED, SC = SCHEDULED, IP = IN PROCESS, SH = SHIPPED
*   XXXXXX STATUS DATE (YYMMDD)
*          XX INITIAL OF PERSON REPORTING STATUS
*             XXXXXXXXX PRODUCT TYPE NUMBER
*                       XXXXXX UNIT SERIAL NUMBER
*                              XXXXXX PRODUCTION COST
*                                     XXXXX CUSTOMER ORDER NUMBER
*                                           XXXX CUSTOMER CODE
*                     PRODUCTION PLAN DATE YYMMDD XXXXXX
*                          PRODUCTION DATE YYMMDD ACTUAL XXXXXX
*                                            SHIP DATE YYMMDD XXXXXX
*                                               ORDER TO SHIP NUMBER XXXXX
*                                                     SPECIAL SEARCH CODES XXX
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
```

Figure 5–15. The Line Control Position Showing the First Nonheld Data Line

5.2.7. Rolling with Held Lines

When you enter a number in the HLD LN control position and press the XMIT key, you can roll through a report, holding the specified number of lines from the beginning of the report at the top of the screen.

Select one of the following to roll with held lines:

- press the TAB key to the RL control position and press the XMIT key;
- enter a plus or minus sign in the RL control position and then press the XMIT key; or
- tab to the LINE control position, enter the line number you want, and press the XMIT key.

In Figure 5–16, 18 is entered in the LINE position:

```
LINE▷ 18☑  FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷ 5  PSWD▷           ▷
.DATE  83/06/29  13:13:28  TYPE=B  RID=001  83/06/29  JDOE        <   30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*XX STATUS CODE: OR = ORDERED, SC = SCHEDULED, IP = IN PROCESS, SH = SHIPPED
*   XXXXXX STATUS DATE (YYMMDD)
*          XX INITIAL OF PERSON REPORTING STATUS
*             XXXXXXXXX PRODUCT TYPE NUMBER
*                       XXXXXX UNIT SERIAL NUMBER
*                              XXXXXX PRODUCTION COST
*                                     XXXXX CUSTOMER ORDER NUMBER
*                                           XXXX CUSTOMER CODE
*                    PRODUCTION PLAN DATE YYMMDD XXXXXX
*                         PRODUCTION DATE YYMMDD ACTUAL XXXXXX
*                                        SHIP DATE YYMMDD XXXXXX
*                                           ORDER TO SHIP NUMBER XXXXX
*                                                 SPECIAL SEARCH CODES XXX
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
```

Figure 5–16. Display with Held Lines before Rolling

When you press the XMIT key, the data in the report rolls up until line 18 is reached, as shown in Figure 5–17. Note that the five header lines and the control line remain on the screen. The LINE control position in the control line shows that the line number of the first nonheld line displayed is 18.

```
LINE▷ 18☑  FMT▷   RL▷ -     SHFT▷      HLD CHR▷    HLD LN▷ 5  PSWD▷          ▷
.DATE  83/06/10  16:30:46  TYPE=B  RID=001  82/12/23  JDOE          <   30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
*                                                    SPECIAL SEARCH CODES XXX
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
                    ..... END REPORT .....
```

Figure 5–17. Display with Held Lines after Rolling

6. Update Functions

6.1. GENERAL

You can use the MAPPER 80 update functions to update both the reports stored in the MAPPER 80 data base and the data in those reports. The update functions, as well as all the functions described in this manual, are listed in summary form in Table A–1.

MAPPER 80 software allows two or more users to access a report at the same time, but you can update a report only when no one else is accessing it. If you attempt to update a report when someone else is accessing it, MAPPER 80 software displays a lockout message. When you receive a lockout message, wait until the other user finishes updating the report before you retry the operation. Inform your MAPPER 80 coordinator if the lockout message occurs too frequently.

This section discusses: the updating of lines and parts of lines within a report (6.2); and the updating of an entire report (6.3).

Line update functions are:

- ADD LINE (+) Adds lines
- DELETE LINE (–) Deletes lines
- DUPLICATE LINE (X) Duplicates lines
- SOE UPDATE (▷) Updates lines
- ROLL BACK (RB) Returns revised lines to original condition
- REPORT PASSWORD (PWSD) Activates the report password

Report update functions are:

- ADD REPORT (AR) Adds a new report
- DELETE REPORT (DR) Eliminates the report
- DUPLICATE REPORT (XR) Copies the report
- ADD ON (ADON) Adds one report to another report

- DELETE RESULTS (DEL) Deletes results
- UPDATE RESULTS (UPD) Updates results
- REPLACE (REP) Replaces a report

You use the DELETE RESULTS and UPDATE RESULTS functions after the SEARCH UPDATE (7.6) and MATCH UPDATE (7.9) functions to make permanent modifications to the original report based on the generated results.

6.2. LINE UPDATE FUNCTIONS

6.2.1. SOE UPDATE Function

The SOE UPDATE function is a 1-step operation for changing data. It's the most frequently used function in report updating.

To make changes, enter the SOE character (▷) in front of the items you want to change and enter the changes. Changes can range from one character to the entire screen.

In the following example, the serial number in the first line of data in report 2B changes from 436767 to 436766:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/20  15:23:42  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1▷436767☑      84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768       84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071       84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4              94754 ARCO
 SC 750110 LS BLACKBOX5 675281       97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582       84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327       54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061       54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324       54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367       52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581       89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7              99842 FEDS
 OR 741227 LS BLACKBOX7              99725 INTR
 SC 750108 LS BLACKBOX7 665481       97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597       84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627       44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581       84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8              92788 FEDS
```

In the next screen, the cursor returns to the control line and the screen contains the updated data. With each transaction, the current date and time and your user id appear in the date line (line 1).

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/24  15:55:06  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

6.2.2. ADD LINE Function

The ADD LINE function adds new or predefined lines to a report.

6.2.2.1. Adding New Lines

The ADD LINE function can insert new lines in a report. Tab characters are automatically inserted in the locations defined for the form type.

To add lines, erase the line just ahead of where you want to add lines and enter:

```
▷]n+
```

where:

▷
: Is the SOE character.

]
: Is a closing bracket (the character that calls for a line quantity change).

n
: Is the number of lines to add (maximum 99).

+
: Is a plus sign (the function call to add lines).

The following screen shows report 2B with the first data line erased and the ADD LINE function request entered:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/24  15:55:06  TYPE=B  RID=002  82/08/11  JDOE         <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
▷11+☑
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

After you press the XMIT key, a blank line appears after the first data line, and the line where you submitted the request reappears:

```
LINE▷ 1☑    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/24  15:59:34  TYPE=B  RID=002  82/08/11  JDOE         <   49 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224

 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
```

You can now enter data in the blank line using the SOE UPDATE function (see 6.2.1).

6.2.2.2. Adding Predefined Lines

The ADD LINE function can add predefined lines that already include data in certain fields. These predefined lines are especially useful when several fields of data are identical for a group of added lines, and for adding asterisk, period, and blank type lines to the report.

You can predefine a maximum of 9 lines.

To add predefined lines, erase the line where you made the request and enter:

```
▷]n+p
```

where:

▷
: Is the SOE character.

]
: Is a closing bracket (the character that calls for a line quantity change).

n
: Is the number of lines to add.

+
: Is a plus sign (the function call to add lines).

p
: Is the type of predefined line defined in RID 0 of the form type: the first predefined line equals 1, the second predefined line equals 2, etc.

NOTE:

To see which predefined lines are available, add a report using the ADD REPORT function (6.3.1). The new report displays any predefined lines set up for the form type. Your MAPPER 80 coordinator can give you more details on predefined lines.

The following example shows how to add one type 1 predefined line:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/24  15:59:34  TYPE=B  RID=002  82/08/11  JDOE         <   49 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224
▷]1+1☑
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
```

The next screen shows that the erased line is restored and the predefined data is in the added line.

```
LINE▷ 1☑    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/24  16:06:01  TYPE=B  RID=002  82/08/11  JDOE         <   50 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224

 IP        XX    BOX                        XXXX
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
```

6.2.3. DUPLICATE LINE Function

The DUPLICATE LINE function duplicates lines within a report or result. It is especially useful for adding multiple lines of data with repetitive fields.

To duplicate lines, erase the line you want to duplicate and enter:

```
▷]nx
```

where:

▷
: Is the SOE character.

]
: Is a closing bracket (the character that calls for a line quantity change).

n
: Is the number of times to duplicate the line.

X
: Is alphabetic X (the function call to duplicate lines).

Optionally, you can duplicate a group of lines by adding another number to the request statement:

```
▷]nXg
```

where:

g
: Is the number of lines in the group, and n times g cannot exceed 99.

NOTE:

You can only duplicate those lines displayed on the screen.

Figure 6–1 shows how to duplicate the line where the request is made.

The line (now erased) is:

```
OR      XX      BOX      XXXX
```

```
LINE▷ 1     FMT▷    RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/24  16:06:01  TYPE=B  RID=002  82/08/11  JDOE         <   50 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224

▷]1x☑
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
```

Figure 6–1. Duplicating Lines

In the next screen, the original line reappears with the duplicated line.

```
LINE▷ 1☑    FMT▷    RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/24  16:10:04  TYPE=B  RID=002  82/08/11  JDOE         <   51 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224

 IP        XX    BOX                      XXXX
 IP        XX    BOX                      XXXX
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
```

6.2.4. DELETE LINE Function

The DELETE LINE function deletes lines from reports. You can delete up to 999 lines in one request. If the number of lines to delete exceeds the number of lines in the report, the system deletes only up to the number of lines in the report.

To delete lines, erase the first line you want to delete and enter:

```
▷]n-
```

where:

▷
: Is the SOE character.

]
: Is a closing bracket (the character that calls for a line quantity change).

n
: Is the number of lines to delete (up to 999).

-
: Is a minus sign (the function call to delete lines).

The following screen shows how to delete the two predefined lines:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/24  16:10:04  TYPE=B  RID=002  82/08/11  JDOE        <   51 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224

▷]2-☑
 IP        XX    BOX                       XXXX
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
```

The next screen shows the report after the two lines are deleted:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/24  16:13:40  TYPE=B  RID=002  82/08/11  JDOE          <   49 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766        84389 AMCO 741223 741224

 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
```

6.2.5. ROLL BACK Function (RB)

The ROLL BACK function restores the contents of a report to the conditions existing before you used a line updating function to add, delete, duplicate, or update a line.

You can use the ROLL BACK function only on:

- A report displayed on the screen and
- The data in that report when it was initially called onto the screen by the DISPLAY function

You cannot use this function with results or update results. In Figure 6–2, report 2B has one blank line added to it:

```
LINE▷ rb☑  FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/29  10:22:53  TYPE=B  RID=002  82/08/11  JDOE          <   49 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436766         84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768         84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071         84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327         54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324         54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367         52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581         89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7                99842 FEDS
 OR 741227 LS BLACKBOX7                99725 INTR
 SC 750108 LS BLACKBOX7 665481         97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597         84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627         44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581         84381 FEDS 741215 741515
```

Figure 6–2. Report before ROLL BACK Function

To use the ROLL BACK function, key in RB on line 0 of the displayed report (one that had a line updating function performed on it) and press the XMIT key. The report in Figure 6–2 is shown in Figure 6–3 after the ROLL BACK function.

```
LINE▷ 1      FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767         84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768         84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071         84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327         54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324         54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367         52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581         89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7                99842 FEDS
 OR 741227 LS BLACKBOX7                99725 INTR
 SC 750108 LS BLACKBOX7 665481         97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597         84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627         44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581         84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8                92788 FEDS
```

Figure 6–3. Report after ROLL BACK Function

6.2.6. Report Security

You can assign a report password to a report at any time to prevent accidental destruction of report data. Once you assign a report password, you cannot update the report using the line update functions unless you first key in the password in the password field of line 0. The password is not displayed when displaying the report on the screen.

6.2.6.1. How to Assign a Report Password

Follow these steps to create a report password:

1. Display the report on the screen.

2. Key in the password after the PSWD symbol in line 0 and press the XMIT key. A password can contain up to six alphanumeric characters.

   Figure 6–4 shows the screen after you key in the password, passwd, but before you press the XMIT key.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷passwd▯   ▷
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE          ‹   48 LINES›
```

Figure 6–4. Assigning a Report Password

After you press the XMIT key, the PSWD field of line 0 is blank.

NOTE:

Once you assign a password, you cannot modify the report without first entering that password.

6.2.6.2. How to Change a Report Password

Use these steps to change a report password:

1. Display the password protected report on the screen.

2. Enter the existing password into the PSWD field (shown in Figure 6–4), and press the XMIT key.

3. Enter the new password into the PSWD field and press the XMIT key.

Figure 6–5 shows the screen after you key in the new password, newpsd, but before you press the XMIT key.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷newpsd☑    ▷
.DATE  83/06/29  13:15:36  TYPE=B  RID=002  83/06/29  JDOE          ‹   48 LINES›
```

Figure 6–5. Changing a Report Password

After you press the XMIT key, the password is changed, and the PSWD field of line 0 is blank.

6.2.6.3. How to Delete a Report Password

Follow these steps to delete a report password:

1. Display the password protected report on the screen.
2. Key in the password and press the XMIT key.
3. Key in CLEAR in the PSWD field and press the XMIT key to delete the report password.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷clear☑     ▷
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE          ‹   48 LINES›
```

NOTE:

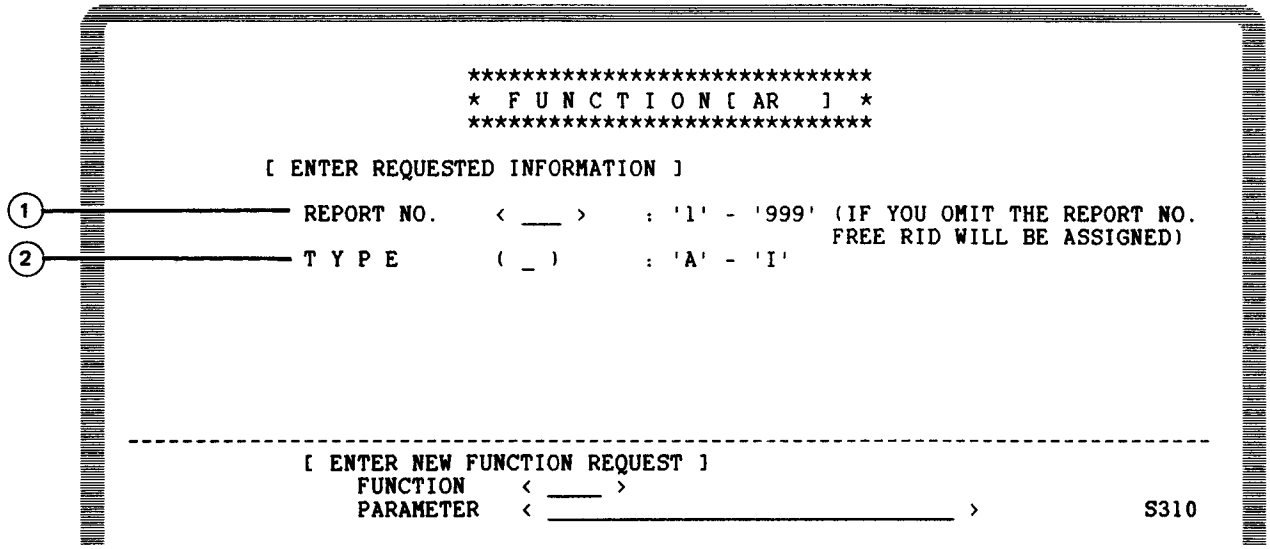
You cannot use the word CLEAR as a report password.

6.3. REPORT UPDATE FUNCTIONS

6.3.1. ADD REPORT Function (AR)

The ADD REPORT function adds a new report to the data base.

To call this function, key in AR and press the XMIT key. Figure 6–6 shows the ADD REPORT function request screen.



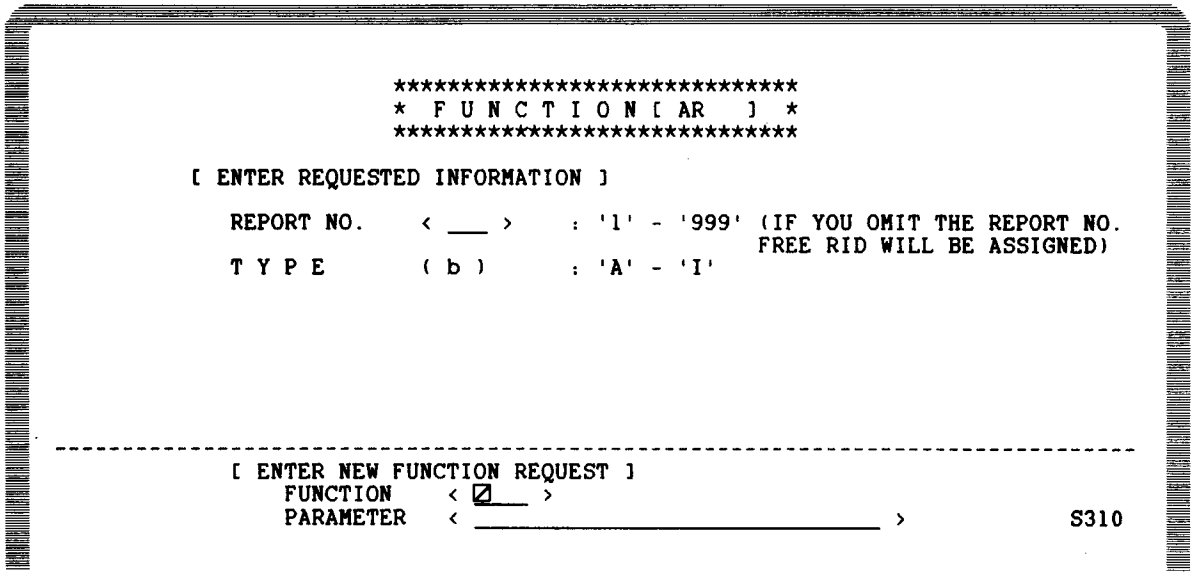
NOTES:

(1) Use this field to specify the RID number of the new report. If you omit this field, the MAPPER 80 system automatically assigns an open RID number.

(2) Use this field to specify the type (A through I) of the new report.

Figure 6–6. ADD REPORT Function Request Screen

In this example, key in type B and omit the report number:



The next screen shows the header and predefined lines of the new report displayed on the screen after you press the XMIT key. The added report is generated from the type B RID 0 definition.

```
LINE▷ 1☑   FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/29  10:40:21  TYPE=B  RID=003  83/06/29  JDOE         <   16 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.

 IP        XX    BOX                          XXXX



                     ..... END REPORT .....
```

The new report is generated in type B. No RID number is specified, so the first available RID, RID3, is assigned. The RID number is displayed in line 1.

The added report contains only blank and predefined lines that you can delete or modify using the SOE UPDATE function (6.2.1.).

You can increase the number of displayed data lines using the ADD LINE function (6.2.2) or DUPLICATE LINE function (6.2.3.).

The fast access format for the ADD REPORT function is:

AR {rt / t}

where:

r
: Is the RID number.

t
: Is the type.

Example:

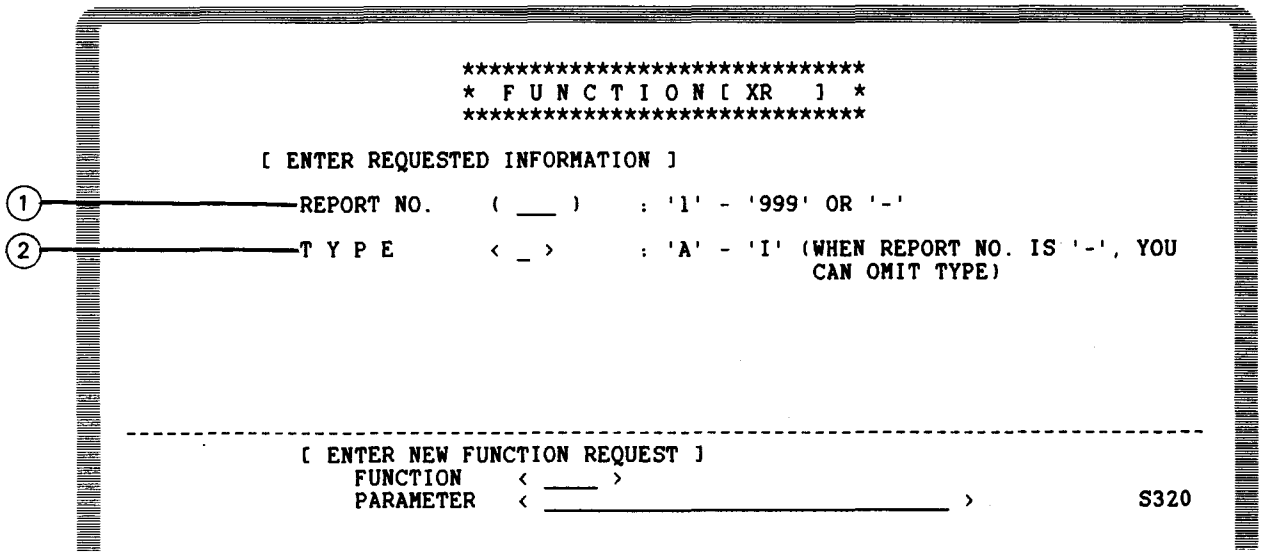
To perform the operation in the previous example, key in AR B☑.

6.3.2. DUPLICATE REPORT Function (XR)

The DUPLICATE REPORT function creates a new report by duplicating an existing report. You can also use this function to duplicate a result created by a function such as MATCH, SORT, or TOTALIZE. (See 2.4 for an explanation of a result.)

To call the DUPLICATE REPORT function, key in XR and press the XMIT key.

Figure 6–7 shows the DUPLICATE REPORT function request screen:



NOTES:

(1) This field specifies the RID number of the report you want to duplicate. Key in a minus (–) sign to specify the report on display.

(2) This field specifies the type (A to I) of the report you want to duplicate. However, if you specify – as report number, you can omit this field.

Figure 6–7. DUPLICATE REPORT Function Request Screen

The following screen duplicates report 2B. The new report is assigned the first available RID number and takes the format of report 2B.

```
                    ******************************
                    *  F U N C T I O N [ XR   ]  *
                    ******************************

        [ ENTER REQUESTED INFORMATION ]

           REPORT NO.     ( 2__ )     : '1' - '999' OR '-'

           T Y P E        < b >       : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                              CAN OMIT TYPE)




--------------------------------------------------------------------------------
              [ ENTER NEW FUNCTION REQUEST ]
                  FUNCTION    < ☑___ >
                  PARAMETER   < _____________________________ >            S320
```

Note that report 4B does not contain the identical line 1 header from report 2B. For more information on line 1 header items, see the MAPPER 80 form generation and utilities user guide, UP-9736 (current version).

When you press the XMIT key, report 2B (Figure 6–8) is duplicated to report 4B (Figure 6–9) and is displayed on the screen.

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/20  15:23:42  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

Figure 6–8. Report 2B

```
LINE▷ 1Ø    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/29  10:51:41  TYPE=B  RID=004  83/06/29  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

Figure 6–9. Report 4B

The fast access format for the DUPLICATE REPORT function is:

XR {rt / -}

where:

`rt`
: Is a report not on display.

`-`
: Is a report or result on display.

`r`
: Is the RID number.

`t`
: Is the type.

Example:

To perform the previous example, key in XR 2B.

6.3.3. REPLACE Function (REP)

The REPLACE function replaces the contents of a specified report (receiving report) with a report or result (issuing report). The issuing report can be the report or result currently displayed on the screen or some other report that is not on display.

The line length of both the receiving and issuing reports must be the same.

To call this function, key in REP and press the XMIT key. Figure 6–10 shows the REPLACE function request screen.

```
                    ******************************
                    *  F U N C T I O N [ REP  ]  *
                    ******************************

          [ ENTER REQUESTED INFORMATION ]   COPY FROM (1) TO (2)
            (1) ISSUING REPORT
             REPORT NO.     ( -__ )     : '0' - '999' OR '-'

             T Y P E        < _ >       : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                                     CAN OMIT TYPE)

            (2) RECEIVING REPORT
             REPORT NO.     ( 3__ )     : '0' - '999'

             T Y P E        ( b )       : 'A' - 'I'

-------------------------------------------------------------------------------
             [ ENTER NEW FUNCTION REQUEST ]
                 FUNCTION     < ☑___ >
                 PARAMETER    < ____________________________________ >          S340
```

NOTES:

1. Specify the RID number and the type for both the issuing report and receiving report.
2. To specify the report or result on the screen as the issuing report, key in a minus sign (–) in the report number field and leave the type field blank.
3. You cannot use a minus sign (–) to specify the receiving report.

Figure 6–10. REPLACE Function Request Screen

In Figure 6–10, the report on the screen is the issuing report (–) and the receiving report is 3B.

When you press the XMIT key, the receiving report, 3B, receives new data (the contents of the issuing report) and is displayed on the screen:

```
LINE▷ 1☑    FMT▷    RL>        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/29  11:01:46  TYPE=B  RID=003  83/06/29  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE  .IN.  TYPE    .NUMBER. COST  .NUMBR.CODE. PLAN  .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767         84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768         84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071         84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327         54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324         54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367         52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581         89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7                99842 FEDS
 OR 741227 LS BLACKBOX7                99725 INTR
 SC 750108 LS BLACKBOX7 665481         97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597         84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627         44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581         84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8                92788 FEDS
```

The fast access format for the REPLACE REPORT function is:

```
REP r1t1,r2t2
```

where:

`r1t1`
: Is an issuing report.

`r2t2`
: Is a replaced report.

`r1`
: Is the RID number. (Specify – for a report or result on the screen.)

`t1`
: Is the type. (Omit if you specify – RID.)

`r2`
: Is the RID number.

`t2`
: Is the type.

Example:

To perform the previous example, key REP –,3B.

NOTE:

The user identification name (the person generating or updating the report) is included in each report. You cannot replace a report unless your user identification name (the user identification name used at sign-on) is identical to the one recorded in the report. If the names are not identical, an error message is displayed.

The RID password is ignored for the REPLACE function.

6.3.4. ADD ON Function (ADON)

The ADD ON function creates a new report by adding one report (known as the additional report) to another report or result (known as the original report). The original report may or may not be displayed on the screen.

The line length of the original and the additional reports must be the same.

To call the ADON function, key in ADON and press the XMIT key.

The ADON function request screen is shown in Figure 6–11:

```
                    ******************************
                    *  F U N C T I O N [ ADON ]  *
                    ******************************

        [ ENTER REQUESTED INFORMATION ]   ADD (2) AFTER (1)
          (1) ORIGINAL REPORT
           REPORT NO.     ( 4__ )     : '0' - '999' OR '-'

           T Y P E        < b >       : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                                   CAN OMIT TYPE)

          (2) ADDITIONAL REPORT
           REPORT NO.     ( 1__ )     : '0' - '999'

           T Y P E        ( b )       : 'A' - 'I'

-------------------------------------------------------------------------------
           [ ENTER NEW FUNCTION REQUEST ]
               FUNCTION     < ☑___ >
               PARAMETER    < ____________________________ >            S330
```

NOTES:

1. Specify the RID number and type for both the original (old) and the additional report.
2. Key in a minus sign (–) in the report number field and leave the type field blank when the report or result displayed on the screen is the original report.
3. You cannot use a minus sign (–) to specify the additional report.

Figure 6–11. ADON Function Request Screen

In Figure 6–11, the original report is 4B, and the additional report is 1B. When you press the XMIT key, a new result appears on the screen. The result consists of report 4B followed by the data of report 1B; the header of report 1B is omitted.

This is a temporary result. Unless you duplicate it (DUPLICATE REPORT) or use it as a replacement (REPLACE), it is eliminated from the data base when the screen is erased. You can examine the added data by rolling up the screen.

The fast access format for the ADON function is:

```
ADON r1t1,r2t2
```

where:

`r1t1`
Is the original report specification.

`r2t2`
Is the additional report specification.

`r1`
Is the RID number. (Specify – for a displayed report or result.)

`t1`
Is the type. (Omit if you specify – RID.)

`r2`
Is the RID number.

`t2`
Is the type.

Example:

To add report 1B to 4B, key in ADON 4B,1B. To add report 1B to a report or result on display, key in ADON –,1B.

6.3.5. DELETE REPORT Function (DR)

The DELETE REPORT function removes a report from the MAPPER 80 data base.

To delete a report, display the report and key in DR. Your user id must be the same as the user id of the person who created or last updated the report, i.e., the user id on line 1.

```
LINE▷ dr☑  FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/07/05  10:47:50  TYPE=B  RID=003  83/06/29  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

The next screen (Figure 6–12) is the DELETE REPORT function request screen. Key in the RID number and form type, and press the XMIT key.

```
                    ********************************
                    *  F U N C T I O N [ DR   ]  *
                    ********************************

        [ ENTER REQUESTED INFORMATION] (DESIGNATE REPORT WHICH YOU DISPLAYED
                                        ON SCREEN)
           REPORT NO.     ( 3__ )     : '1' - '999' (CANNOT DESIGNATE '-')

           T Y P E        ( b )       : 'A' - 'I'




--------------------------------------------------------------------------------
           [ ENTER NEW FUNCTION REQUEST ]
              FUNCTION    < ____ >
              PARAMETER   < ____________________________ >            S350
```

Figure 6–12. DELETE REPORT Function Request Screen

The MAPPER 80 system compares your user id with the user id in line 1 of the report. If they are the same, the report is deleted; otherwise, this error message is displayed:

```
(Error 686) SIGN ON User Identification Name and report User Identification
Name are different
```

When this message appears, perform an update operation (update line) before deleting the report.

To see if the report has been deleted, try to display the deleted report. If the report is deleted, the following message appears on your screen:

```
▷<ERR 158> (THE RID DOESN'T EXIST)
```

6.3.6. DELETE RESULTS Function (DEL)

The DELETE RESULTS function deletes update result lines from the original report. The SEARCH UPDATE (SU) or MATCH UPDATE (MAU) functions produce an update result.

To delete result lines, enter:

```
DEL
```

If the report has an update password, enter:

```
DEL passwd
```

where:

passwd
: Is a 1- to 6-character alphanumeric password.

For example, perform a SEARCH UPDATE (7.6) on the original report (4B) to locate all lines that are blank in the Serial Number field. The update result of the SEARCH UPDATE displays all lines that are blank in the Serial Number field. To delete these lines from report 4B, enter DEL or DEL passwd and press the XMIT key.

You can use the following functions to modify an update result before executing the DELETE RESULTS (DEL) function: ADD LINE, ADON, CHANGE, DELETE LINE, DUPLICATE LINE, FIND, MATCH, SEARCH, SOE UPDATE, SORT, and TOTALIZE.

When you executing the DELETE RESULTS function using the unmodified update result, all lines in the update result are deleted from the original report. However, if you delete lines from the update result, they are not deleted from the original report. Any other modifications made to the update result are not made to the original report when you execute the DELETE RESULTS function.

6.3.7. UPDATE RESULTS Function (UPD)

The UPDATE RESULTS function replaces lines in the original report with the update result lines produced by the SEARCH UPDATE (SU) or MATCH UPDATE (MAU) function.

To update a report, enter:

```
UPD
```

If the report has an update password, enter:

```
UPD passwd
```

where:

passwd
: Is a 1- to 6-character alphanumeric password.

For example, perform a SEARCH UPDATE (7.6) on the original report report (4B) to locate all lines that are blank in the Serial Number field. The update result displays all lines that are blank in the Serial Number field. To enter serial numbers for some or all of the lines that currently do not have serial numbers, use the SOE UPDATE function. When you make the appropriate changes to the displayed update result, press the XMIT key. The next display shows the original update result modified by your changes. You can now update report 4B with these modified update result lines by entering UPD or UPD passwd and pressing the XMIT key.

You can use the following functions to modify an update result before executing the UPDATE RESULTS function: ADD LINE, ADON, CHANGE, DELETE LINE, DUPLICATE LINE, FIND, MATCH, SEARCH, SOE UPDATE, SORT, and TOTALIZE.

When you execute the UPDATE RESULTS function, changes you made to the update result are made to the original report. However, lines that you delete from the update result have no effect on the original report. In addition, lines that you add to the update result are added to the end of the original report.

7. Reference Functions

7.1. INDEX FUNCTION (I)

The INDEX function displays a number of lines from all reports in a form type. This function is especially useful when you want to see which reports are in a form type.

To call the INDEX function, key in I and press the XMIT key. Figure 7–1 shows the INDEX function request screen:

```
                    ******************************
                    *  F U N C T I O N [ I    ]  *
                    ******************************

        [ ENTER REQUESTTED INFORMATION ]

           T Y P E        ( b )       : 'A' - 'I'

           NO. OF LINE    ( 5__ )     : '1' - '999'

           H E A D E R    < ☑ >       : 'H' = HEADER OF FIRST REPORT ONLY
                                          DISPLAYED


-------------------------------------------------------------------------------
                [ ENTER NEW FUNCTION REQUEST ]
                   FUNCTION     < ____ >
                   PARAMETER    < ____________________________ >          S430
```

NOTES:

1. Key in the type.
2. Key in the number of lines to display (1–999).
3. Key in H when you want to eliminate the headings after the first report.

Figure 7–1. INDEX Function Request Screen

The INDEX function displays:

- The number of active RIDs in the form type
- The total number of lines in the form type
- From 1 to 999 lines from each report in the form type
- The number of lines in each report

The following screen is a display from the INDEX function without using the H option. Note that five lines from each report are displayed. Roll through the result to view the entire index.

```
LINE▷ 1     FMT▷    RL▷        SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷ "RESULT" ▷
.DATE  83/06/29  11:10:56  TYPE=B  RID=      82/08/24  JDOE          <    22 LINES>
.      INDEX COMPLETED   3 ACTIVE RID(S) WITH       126 TOTAL LINES
.
.DATE  83/06/10  16:30:46  TYPE=B  RID=001   82/12/23  JDOE          <    30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
.
.DATE  83/06/10  16:30:09  TYPE=B  RID=002   82/08/11  JDOE          <    48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
.
.DATE  83/06/29  10:51:41  TYPE=B  RID=004   83/06/29  JDOE          <    48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
.
                      ..... END REPORT .....
```

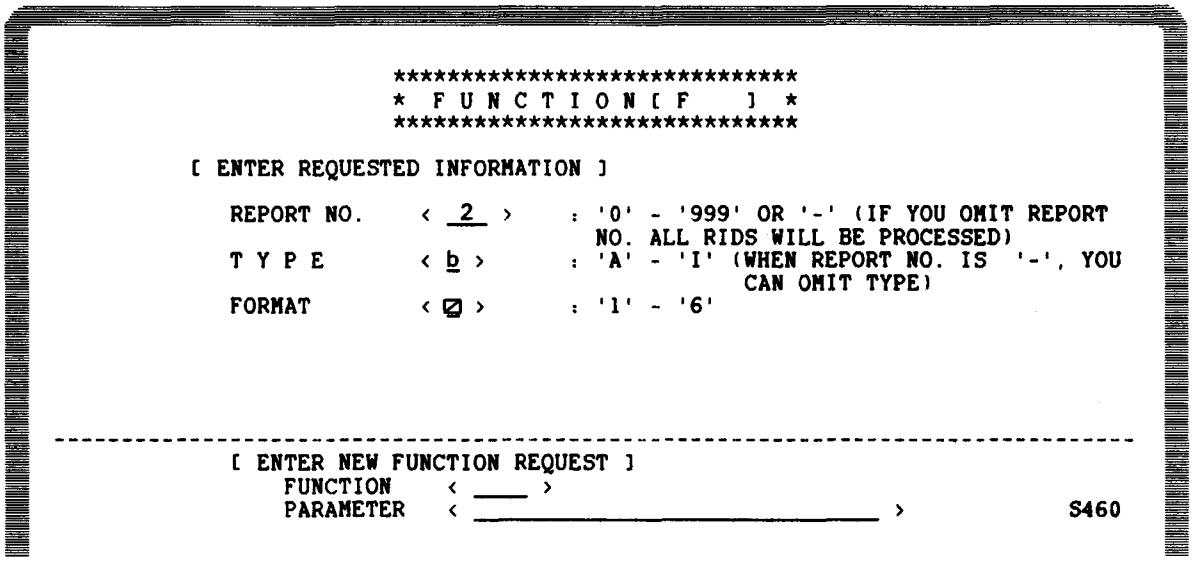
The next screen shows the results of using the INDEX function with the H option:

```
LINE▷ 1     FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷     PSWD▷ "RESULT" ▷
.DATE  83/06/29  11:36:20  TYPE=B  RID=      82/08/24  JDOE          <   26 LINES>
.      INDEX COMPLETED   3 ACTIVE RID(S) WITH       126 TOTAL LINES
.
.DATE  83/06/10  16:30:46  TYPE=B  RID=001  82/12/23  JDOE          <   30 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
*XX STATUS CODE: OR = ORDERED, SC = SCHEDULED, IP = IN PROCESS, SH = SHIPPED
*   XXXXXX STATUS DATE (YYMMDD)
*          XX INITIAL OF PERSON REPORTING STATUS
*             XXXXXXXXX PRODUCT TYPE NUMBER
.
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
.
.DATE  83/06/29  10:51:41  TYPE=B  RID=004  83/06/29  JDOE          <   48 LINES>
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
```

7.2. FIND FUNCTION (F)

The FIND function searches for the first occurrence of specified data in a report or form type. When this function finds data, it displays the line containing the data and subsequent lines in the report. This process is similar to displaying a report and rolling it up to a specific item.

To call the FIND function, key in F and press the XMIT key. Figure 7–2 shows the FIND function request screen.



NOTES:

1. To scan *one* report, enter the number of the report after RID and the form type after TYPE.
2. To scan *all* reports in a form type, leave the RID field blank.
3. To scan a *result,* enter a minus sign (–) after RID.
4. Leave the FORMAT field blank, unless you want a format other than basic.

Figure 7–2. FIND Function Request Screen

The fast access format for the FIND function is:

$$F \begin{Bmatrix} rt[,f] \\ t[,f] \\ -[,f] \end{Bmatrix}$$

where:

r
: Is the RID number.

t
: Is the type.

f
: Is the format number.

`rt[,f]`
Designates one report.

`t[,f]`
Indicates RID number omitted; all reports handled.

`-[,f]`
Specifies the report or result on the screen.

Example:

To find the data in RID2, type b and key in F 2b.

To display the function mask for the form type, fill in the function request screen and press the XMIT key.

Enter the data you want to find under the appropriate field headers and asterisks. You can specify data in one or more fields. If you want to find several entries in the same field, make these entries below the mask. Multiple parameter entries for the FIND function are identical to those used with the SEARCH function (see 7.5).

The following example finds data lines containing either INTR or DICO in the CUST CODE field. Both are tab type lines; thus, the function scans only tab type lines in the form type. To find asterisk type lines, key in an asterisk (*) in the first column below the mask.

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
                                              intr
                                              dico
```

The function displays the first line of the report (line 1) as a hold line, the data line with the first find, and the data lines immediately following it in the report.

```
LINE▷ 8☑   FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷ 1  PSWD▷          ▷
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
 OR 741217 LS BLACKBOX9               98755 AMCO
 OR 741210 LS BLACKBOX9               98782 USSC
 IP 741217 LS BLACKBOX9 538993        84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787        82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287        84361 USSC 741230 741230
```

If you want to continue the find process, enter RSM or press the F1 function key.

The following options are available for the FIND and SEARCH functions.

- A Processes all line types. (See 7.5.5.2.)
- R Scans selected reports. (See 7.5.5.5.)
- @ Finds spaces. (See 7.5.5.1.)
- / Finds slash as data. (See 7.5.5.6.)

7.3. RESUME FUNCTION (RSM)

The RESUME function continues executing a function that was interrupted by a display.

To resume a function, enter RSM.

```
LINE▷rsm☑  FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷ 1  PSWD▷          ▷
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
 OR 741217 LS BLACKBOX9               98755 AMCO
 OR 741210 LS BLACKBOX9               98782 USSC
 IP 741217 LS BLACKBOX9 538993        84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787        82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287        84361 USSC 741230 741230
```

If you were executing the FIND function, the MAPPER 80 system resumes processing the function on the line following the last line of the screen (see 7.2). Note any other occurrences of the find on the screen because the FIND function does not stop on those occurrences. The following screen is the second screen containing a found line:

```
LINE▷ 39☑  FMT▷   RL▷ -     SHFT▷      HLD CHR▷    HLD LN▷ 1  PSWD▷          ▷
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
 IP 741230 LS GREENBOX4 974085        84581 INTR 741228 741230
 OR 741210 LS GREENBOX5               99753 DICO
 SC 750110 LS GREENBOX6 674481        95964 FEDS 750130
 SH 741206 LS GREENBOX7 669624        54682 AMCO 741201 741205 741206 S8553
 OR 741228 LS GREENBOX8               94525 FEDS
 SC 750105 LS GREENBOX8 677481        97929 INTR 750105
 IP 741225 LS GREENBOX8 750933        86381 FEDS 741225 741225
 SC 750110 LS GREENBOX8 975481        99943 AMCO 750110
 OR 740310 LS GREENBOX9               99951 AMCO
                    ..... END REPORT .....
```

To see all occurrences of the lines you are searching, repeat the RESUME function or press the F1 key until there are no finds. The following message indicates there are no further finds:

```
<ERR 717> (CORRESPONDING DATA DOESN'T EXIST)
```

7.4. BINARY FIND FUNCTION (BF)

The BINARY FIND function is similar to the FIND function. It finds the first occurrence of specified data in a report and displays the line containing the data and subsequent lines of the report. It is more efficient than the conventional FIND when a large number of lines must be scanned. However, you can use this function only when the fields containing the specified data are sorted (7.10) in ascending order, and you cannot use it on a result.

In the actual find process, the BF function samples the data at midpoint in the report and determines whether the specified data is before or after that point. It then samples again at midpoint in the remaining part, and continues dividing and sampling until it finds the item.

To call the BINARY FIND function, key in BF and press the XMIT Key. Figure 7–3 shows the BINARY FIND function request screen:

```
                    ******************************
                    *  F U N C T I O N [ BF   ]  *
                    ******************************

        [ ENTER REQUESTED INFORMATION ]

           REPORT NO.     ( 2__ )     : '0' - '999' OR '-'

           T Y P E        < b >       : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                                   CAN OMIT TYPE)
           FORMAT         < ☐ >       : '1' - '6'




-------------------------------------------------------------------------------
                [ ENTER NEW FUNCTION REQUEST ]
                    FUNCTION    < ____ >
                    PARAMETER   < ____________________________ >          S420
```

NOTE:

Leave the FORMAT field blank unless you want a format other than basic.

Figure 7–3. BINARY FIND Function Request Screen

The fast access format for the BINARY FIND function is:

$$BF \left\{ \begin{matrix} rt[,f] \\ t[,f] \end{matrix} \right\}$$

where:

r
: Is the RID number.

t
: Is the type.

f
: Is the format.

Transmit the screen in Figure 7–3 to display the function mask for report 2B. Use this mask to specify the data you want to search. In the following screen, a BINARY FIND function finds lines with BLACKBOX4 in the PRODUCT TYPE field:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
             blackbox4☑
```

The next screen shows the result of the BINARY FIND function; it is the same display as for the FIND function:

```
LINE▷ 10☑  FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷ 1  PSWD▷          ▷
.DATE  83/06/29  12:58:22  TYPE=B  RID=002  83/06/29  JDOE
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324         54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367         52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581         89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7                99842 FEDS
 OR 741227 LS BLACKBOX7                99725 INTR
 SC 750108 LS BLACKBOX7 665481         97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597         84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627         44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581         84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8                92788 FEDS
 SH 741203 LS BLACKBOX8 945327         74272 FEDS 741201 741202 741203 S8518
 OR 741217 LS BLACKBOX9                98755 AMCO
 OR 741210 LS BLACKBOX9                98782 USSC
 IP 741217 LS BLACKBOX9 538993         84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787         82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287         84361 USSC 741230 741230
 SH 741204 LS BLACKBOX9 714577         64231 AMCO 741201 741203 741204 S8531
 SC 750110 LS BLACKBOX9 735481         97242 USSC 750116
```

NOTE:

When you sort (in ascending order) more than one field for the BINARY FIND, the priority of the key fields decreases from left to right. If you do not sort the fields, the following error message is displayed:

```
< ERROR - 718 >   (Not sorted)
```

You can also use the following options:

- Q *Pertinent data is found one time only.*
- @ *Empty fields are located.*
- / *Slashes are contained in the located data.*

7.5. SEARCH FUNCTION (S)

The SEARCH function scans a report, result, or an entire form type for all data lines containing characters specified in a function mask. The FIND function displays only the first occurrence of the specified characters, but the SEARCH function displays all occurrences, and the display is a result.

To call this function, key in S and press the XMIT key. Figure 7–4 shows the SEARCH function request screen:

```
                    ******************************
                    *  F U N C T I O N [ S    ]  *
                    ******************************

        [ ENTER REQUESTED INFORMATION ]

           REPORT NO.     < ___ >     : '0' - '999' OR '-' (IF YOU OMIT REPORT
                                        NO. ALL RIDS WILL BE PROCESSED)
           T Y P E        < _ >       : 'A' - 'I' (WHEN REPORT NO. IS  '-', YOU
                                          CAN OMIT TYPE)
           FORMAT         < _ >       : '1' - '6'




-------------------------------------------------------------------------------
           [ ENTER NEW FUNCTION REQUEST ]
              FUNCTION     < ____ >
              PARAMETER    < ____________________________ >            S460
```

Figure 7–4. SEARCH Function Request Screen (Part 1 of 2)

NOTES:

1 To search *one* report, enter the RID number and type of the report.

2. To search *all* reports in a form type, leave the RID field blank.

3. To search the report or result displayed on the screen, enter a minus sign (–) after RID.

4. Leave the FORMAT field blank, unless you want a format other than basic.

Figure 7–4. SEARCH Function Request Screen (Part 2 of 2)

The fast access format for the SEARCH function is:

```
S {rt[,f]}
  {-[,f]}
  {t[,f] }
```

where:

`r`
: Is the RID number.

`t`
: Is the type.

`f`
: Is the format.

`-`
: Is the report or result on display.

`rt[,f]`
: Specifies a report not on display.

`-[,f]`
: Specifies a report or result on display.

`t[,f]`
: When you omit the report number, all reports within the type are searched. However, when you specify the R option, only the specified reports are searched.

Complete the previous screen and press the XMIT key to display the function mask. This mask displays the format headers (basic, unless otherwise specified) for the report or form type, and a line of asterisks denoting the field sizes and positions. Enter the characters you want to find under these asterisks.

In the following example, you search report 2B for all shipped (SH) items under the ST CD headers:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 sh
```

The SEARCH function searches the report or form type and displays the result in the next screen. The screen contains the data lines found, the number of lines found, and the number of lines searched, followed by the line of asterisks for the format and the character string searched.

```
LINE▷ 1    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:04:53  TYPE=B  RID=002  83/06/28  JDOE          <   20 LINES>
.     8 LINES FOUND OUT OF    42 LINES
.
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*SH
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
 SH 741204 LS BLACKBOX9 714577        64231 AMCO 741201 741203 741204 S8531
 SH 741206 LS GREENBOX7 669624        54682 AMCO 741201 741205 741206 S8553
                    ..... END REPORT .....
```

You can roll through the result to examine the found lines. The search result exists only as long as it is displayed on the screen; it is not part of the original report data. You can process the result with other functions, specifying it as RID –.

A search result lists line types in the hierarchy: tab, asterisk, and period type lines. The result lists asterisk (*) and period (.) lines as trailer lines when they follow tab lines in the report.

7.5.1. Partial Field Mask

To specify an incomplete parameter, delete the asterisk in the mask for each character position you want to ignore in the search. This limits the field size and affects all search parameters entered under that field. Thus, to search for all lines with BLACKBOX product types, delete the last asterisk under PRODUCT TYPE, as shown in the next screen:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********  ****** ****** ***** **** ****** ****** ****** ***** ***
             blackbox☑
```

You can also specify an incomplete parameter by keying in a slash in the unused trailing positions. Thus, to search for all lines with BLACKBOX product types, key in BLACKBOX/:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
             blackbox/☑
```

Transmit the partial field masks in either of the two previous screens to produce the result in the next screen:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:07:00  TYPE=B  RID=002  83/06/28  JDOE          <   39 LINES>
.    27 LINES FOUND OUT OF    42 LINES
.
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*             BLACKBOX/
.
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
```

NOTE:

To search for the slash (/) as data, use the / option (7.5.5.6).

7.5.2. Range Search

To search a range of characters, key in the parameter of the range's lowest end in the first line under the mask. Then, press the TAB key to move the cursor to the next line and key in an R in column 1 and the parameter for the range's highest end in the appropriate field.

Use the following example to search for BLACKBOXs with serial numbers ranging from 100000 to 700000; notice that a partial field mask is used in the PRODUCT TYPE field:

```
*ST.STATUS.BY. PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP  .SHIP  .SPC.
*CD. DATE  .IN.  TYPE    .NUMBER. COST  .NUMBR.CODE. PLAN  .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********  ****** ****** ***** **** ****** ****** ****** ***** ***
              blackbox  100000
r             blackbox  700000
```

The result in the next screen shows that 9 out of 42 lines contain items satisfying the range requirements:

```
LINE▷ 1    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷  ""RESULT""▷
.DATE  83/06/28  15:09:41  TYPE=B  RID=002  83/06/28  JDOE          <   23 LINES>
.     9 LINES FOUND OUT OF    42 LINES
.
*** ****** ** ********  ****** ****** ***** **** ****** ****** ****** ***** ***
*             BLACKBOX  100000
.THRU
*             BLACKBOX  700000
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP  .SHIP  .SPC.
*CD. DATE  .IN.  TYPE    .NUMBER. COST  .NUMBR.CODE. PLAN  .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741217 LS BLACKBOX9 538993        84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787        82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287        84361 USSC 741230 741230
                    ..... END REPORT .....
```

7.5.3. Search of Previous Result

To search the previous result using the fast access method, enter S – in line 0, as shown in the following screen:

```
LINE▷ S - ☑FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:09:41  TYPE=B  RID=002  83/06/28  JDOE          <   23 LINES>
.     9 LINES FOUND OUT OF    42 LINES
.
*** ****** ** ********  ****** ****** ***** **** ****** ****** ****** ***** ***
*             BLACKBOX  100000
.THRU
*             BLACKBOX  700000
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741217 LS BLACKBOX9 538993        84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787        82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287        84361 USSC 741230 741230
                    ..... END REPORT .....
```

Press the XMIT key to display the function mask, and then key in the new search parameters:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********  ****** ****** ***** **** ****** ****** ****** ***** ***
              blackbox  100000
r             blackbox  500000☑
```

The SEARCH function scans the previous search result and displays a new result:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:13:03  TYPE=B  RID=002  83/06/28  JDOE          <   17 LINES>
.     3 LINES FOUND OUT OF      9 LINES
.
*** ****** ** ********  ****** ****** ***** **** ****** ****** ****** ***** ***
*              BLACKBOX  100000
.THRU
*              BLACKBOX  500000
. . .
.DATE  83/06/28  15:12:13  TYPE=B  RID=002  83/06/28  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
                     ..... END REPORT .....
```

7.5.4. Multiple Parameters

You can specify multiple search parameters using a maximum of 10 lines. If a data line contains one or more of the search criteria, it is displayed in the result.

The following example searches for data lines containing OR or SC status codes, or serial numbers ranging from 100000 to 500000, or BLACKBOX5 product types:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 or
 sc
                        100000
r                       500000
             blackbox5☑
```

This function scans the report and displays the following result:

```
LINE▷ 1Ø    FMT▷    RL▷        SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷ "RESULT" ◁
.DATE  83/06/28  15:15:54  TYPE=B  RID=002  83/06/28  JDOE          <   41 LINES>
.     24 LINES FOUND OUT OF     42 LINES
.
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*OR
*SC
*                       100000
.THRU
*                       500000
*             BLACKBOX5
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE .IN.   TYPE    .NUMBER. COST  .NUMBR.CODE.  PLAN  .ACTUAL.  DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767         84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768         84390 AMCO 741223 741225
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 OR 741210 LS BLACKBOX7                99842 FEDS
```

If you search an entire form type, the result displays finds in multiple reports in sequence, with the headers attached from each report. If a report contains no lines that satisfy the search parameters, that report is skipped in the result.

You can specify multiple parameters on the same line under different headings.

The following screen searches a report for data lines that contain both SC and BLACKBOX5:

```
*ST.STATUS.BY. PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE .IN.   TYPE    .NUMBER. COST  .NUMBR.CODE.  PLAN  .ACTUAL.  DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 sc           blackbox5Ø
```

This is the result:

```
LINE▸ 1☑    FMT▸    RL▸        SHFT▸       HLD CHR▸     HLD LN▸     PSWD▸ "RESULT" ▸
.DATE  83/06/28  15:17:59  TYPE=B  RID=002  83/06/28  JDOE          <   13 LINES>
.      1 LINES FOUND OUT OF     42 LINES
.
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*SC           BLACKBOX5
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
                     ..... END REPORT .....
```

7.5.5. Options

You can use the following options with the SEARCH function:

- @ Searches for spaces.
- A Processes all line types.
- N Includes all lines that do not meet the search parameters. For example, if you search a column for the letter *A* using the N option, the result contains all lines *not* having an *A* in the column.
- D Omits search information lines.
- H Displays only the header of the first report and omits the headers of remaining reports in a multiple report search.
- R Searches a range of reports.
- / Searches for slash as data.

7.5.5.1. @ Option – Search for Spaces

Use the @ option to search for spaces. To use this option, key in an at sign (@) in the line above the mask and in the column in the field under the mask where you want to search for spaces. The following example shows how to use this option using report 2B.

```
@
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
                        @☑
```

The following result displays those lines that have spaces in the SERIAL NUMBER field:

```
LINE▷ 1☑   FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:19:51  TYPE=B  RID=002  83/06/28  JDOE          <   23 LINES>
.    11 LINES FOUND OUT OF    42 LINES
.@
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*                      @
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 OR 750110 LS BLACKBOX4               94754 ARCO
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 OR 741230 LS BLACKBOX8               92788 FEDS
 OR 741217 LS BLACKBOX9               98755 AMCO
 OR 741210 LS BLACKBOX9               98782 USSC
 OR 741210 LS GREENBOX1               96751 FEDS
 OR 741211 LS GREENBOX4               96652 ARCO
 OR 741210 LS GREENBOX5               99753 DICO
 OR 741228 LS GREENBOX8               94525 FEDS
 OR 740310 LS GREENBOX9               99951 AMCO
                    ..... END REPORT .....
```

You can also use a partial field mask to find spaces in selected columns (7.5.1).

7.5.5.2. A Option – Search for All Line Types

The A option searches all line types. The A option is especially useful when reports contain data lines with other characters in the first column, such as, run stream reports with the at sign (@).

Use the A option in the following example to search report 1B for SH items:

```
a
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 sh☑
```

The result displays all lines with status code SH:

```
LINE▷ 1☑   FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ▽▽RESULT▽▽▷
.DATE  83/07/07  10:56:25  TYPE=B  RID=001  83/07/07  JDOE         ◁   15 LINES▷
.     3 LINES FOUND OUT OF    24 LINES
.A
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*SH
. . .
.DATE  83/06/29  13:13:28  TYPE=B  RID=001  83/06/29  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
                     ..... END REPORT .....
```

7.5.5.3. N Option – Search for Not Condition

The N option searches for lines that do not meet the search parameters. The following example uses the N option to search report 2B for nonblank items in the SHIP DATE field:

```
@n
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
                                                              @☑
```

The result displays all lines that are not blank in the SHIP DATE field:

```
LINE▷ 1Ø    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT"▷
.DATE  83/06/28  15:24:08  TYPE=B  RID=002  83/06/28  JDOE          <   20 LINES>
.     8 LINES FOUND OUT OF    42 LINES
.@N
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*                                                                      @
. . .
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
 SH 741204 LS BLACKBOX9 714577        64231 AMCO 741201 741203 741204 S8531
 SH 741206 LS GREENBOX7 669624        54682 AMCO 741201 741205 741206 S8553
                    ..... END REPORT .....
```

7.5.5.4. D and H Options

When you search corresponding multiple reports, the MAPPER 80 software prefaces search results with the following report headers: line 1, the field headers, and the header-divider (*=) line. The D option omits search information lines (lines found and search paramters). The H option displays a single set of headers and suppresses the display of other report headers after the first report in a multiple search.

The examples in Figures 7–5 through 7–10 search for SH items.

To display the SEARCH function mask, key in S B in the LINE field of line 0. ←

The D option omits the LINES FOUND message and the parameters specification. The example in Figure 7–5 uses the D option:

```
d
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 shØ
```

Figure 7–5. Using the D Option to Search

Figure 7–6 shows the result:

```
LINE▷ 1☑    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
.DATE  83/06/29  13:20:29  TYPE=B  RID=001  83/06/29  JDOE          <   43 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
.DATE  83/06/29  13:15:36  TYPE=B  RID=002  83/06/29  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
```

Figure 7–6. Result Screen from D Option

The H option displays only the form type headers of the first report encountered and suppresses the headers of remaining reports in the search. The example in Figure 7–7 uses the H option:

```
h
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 sh☑
```

Figure 7–7. Using the H Option

Figure 7–8 shows the result screen:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷ ''RESULT'' ▷
.DATE  83/06/29  13:22:24  TYPE=B  RID=      83/06/29  JDOE          <   39 LINES>
.    17 LINES FOUND OUT OF   108 LINES
.H
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*SH
. . .
.DATE  83/06/29  13:22:24  TYPE=B  RID=      83/06/29  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
```

Figure 7–8. Result Screen from H Option

The D and H options together produce a result that omits search information lines and displays the form type headers of the first report only. The example in Figure 7–9 uses both the D and H options:

```
dh
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 sh☑
```

Figure 7–9. Using Both the D and H Options

Figure 7–10 shows the result screen:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷  ""RESULT"" ▷
.DATE  83/06/29  13:24:09  TYPE=B  RID=     83/06/29  JDOE          <   33 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
 SH 741204 LS BLACKBOX9 714577        64231 AMCO 741201 741203 741204 S8531
```

Figure 7–10. Result Screen from D and H Options

7.5.5.5. R Option – Search a Range of Reports

Use the R option to search selected reports instead of one or all reports in a form type.

To use the R option, do not specify a RID in the function request screen. For the fast access method, leave out the report number, e.g., S B. In the line above the function mask, key in R and the report numbers. Separate report numbers with a hyphen.

The following example searches the first and second reports:

```
r1-2
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 sh☑
```

The next screen is the result. If a report contains found lines, the result displays both the report header and found lines. Note that only the first header line of RID 2 appears on this screen. Roll to display the remaining headers and lines found in RID 2. The END REPORT line denotes the end of the search result, not the end of the first report searched. When no find occurs for an RID, the headers for that RID do not appear in the result:

```
LINE▷ 1☑   FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
.DATE  83/06/28  15:45:01  TYPE=B  RID=     83/06/28  JDOE         <   36 LINES>
.     9 LINES FOUND OUT OF    66 LINES
.R1-2
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*SH
. . .
.DATE  83/06/10  16:30:46  TYPE=B  RID=001  82/12/23  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 SH 750109 LS BLACKBOX1 455660        74536 NASA 750103 750107 750109 S4572
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
.DATE  83/06/10  16:30:09  TYPE=B  RID=002  82/08/11  JDOE
```

7.5.5.6. Slash Option (/)

The slash option searches for data that includes slashes. The following example searches for data containing slashes in report 1D:

```
/
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.              .
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER    .
*==.======.========.===.====.========.========.======.====.================.==
 ** ****** ********* *** **** ******** ******** ****** **** ****************** **
                                                      union steel/sulfr☑
```

The result is:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:58:49  TYPE=D  RID=001  83/06/28  JDOE          <   14 LINES>
.     2 LINES FOUND OUT OF     14 LINES
./
*** ****** ********* *** **** ******** ******** ****** **** ***** ********** **
*                                                        UNION STEEL/SULFR
. . .
.DATE  83/06/10  16:28:29  TYPE=D  RID=001  82/12/23  JDOE
. <<<  CORPORATE ORDER STATUS  >>>
*ST.ORDER . PRODUCT .ODR.CUST.  UNIT  .EXTENDED.REQ'D .SALE.              .
*CD.NUMBER.  TYPE   .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .    CUSTOMER     .
*==.======.=========.===.====.========.========.======.====.================.==
 OR 98782S BLACKBOX9   1 USSC                    750312 SSF  UNION STEEL/SULFR 54
 OR 96755S GREENBOX9   1 USSC                    750312 SSF  UNION STEEL/SULFR 54
                     ..... END REPORT .....
```

7.5.5.7. Line Type Search Option (*)

This function searches for asterisk (*) and tab lines. When you make no specification, only tab lines are searched.

To search only asterisk (*) lines, key an asterisk (*) into the first column of the parameter line, followed by the search parameter.

The following example searches only asterisk (*) lines that contain SH in the ST CD field in report 1B:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*sh☑
```

The result is:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷     PSWD▷ ""RESULT""▷
.DATE  83/07/07  10:59:32  TYPE=B  RID=001  83/07/07  JDOE          <   22 LINES>
.     1 LINES FOUND OUT OF     24 LINES
.
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*SH
. . .
.DATE  83/06/29  13:13:28  TYPE=B  RID=001  83/06/29  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*SH 750109 LS BLACKBOX1 455661        74536 NASA 750103 750107 750109 S4572
.THE ABOVE LINE IS AN EXAMPLE ITEM WHICH DENOTES:
.SH  THAT THE STATUS OF THE ITEM IS SHIPPED
.    THE STATUS WAS REPORTED ON JAN 9, 1975 BY L. S.
.    THE ITEM IS A BLACK BOX TYPE 1, SERIAL NUMBER 455661
.    ITS RELATED ORDER NUMBER IS 74536
.    THE ORDER IS FOR THE CUSTOMER CODED NASA.
.    IT WAS PLANNED TO BE PRODUCED ON JAN 3, 1975
.    IT WAS ACTUALLY PRODUCED ON JAN 7, 1975
.    IT WAS SHIPPED ON JAN 9, 1975 ON SHIP ORDER NUMBER S4572
                    ..... END REPORT .....
```

7.6. SEARCH UPDATE FUNCTION (SU)

The SEARCH UPDATE function generates an update result. This update result can then be used by the DELETE RESULTS or UPDATE RESULTS functions to modify the contents of the original report.

This function is especially useful when you want to change certain kinds of data or delete numerous items. For instance, you could change the value in a particular field, such as PRODUCT COST, or you could delete all SHIPPED ITEMS from an IN PROCESS report.

NOTE:

Before you use the SEARCH UPDATE function, become familiar with the SEARCH function (7.5), the DELETE RESULTS function (6.3.6), and the UPDATE RESULTS function (6.3.7).

To call the SEARCH UPDATE function, key in SU and press the XMIT key. Figure 7–11 shows the SEARCH FUNCTION request screen.

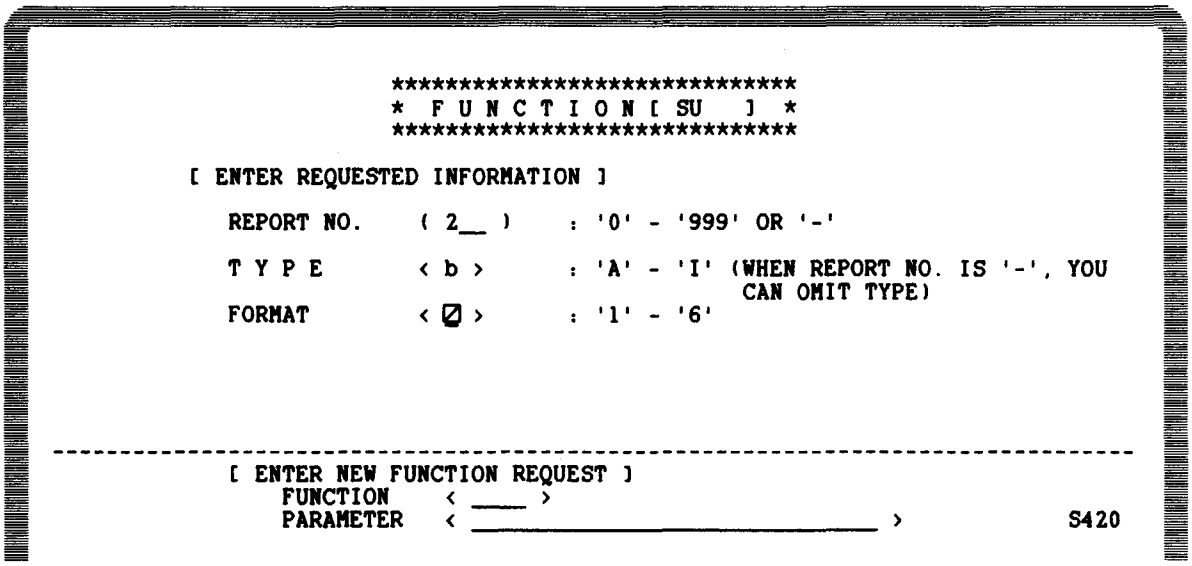


Figure 7–11. SEARCH UPDATE Function Request Screen

The fast access format for the SEARCH UPDATE function is:

```
SU {rt[,f]}
   {-[,f] }
```

where:

`r`
: Is the RID number.

`t`
: Is the type.

`f`
: Is the format number.

`rt[,f]`
: Specifies a report that is not displayed.

`-[,f]`
: Specifies the report currently displayed.

NOTE:

You cannot process a result with this function.

Key in the parameters for the SEARCH UPDATE function in the function mask just as you would for the SEARCH function. All SEARCH function options apply to the SEARCH UPDATE function.

The following example searches the report for all BLACKBOX9s in report 2B:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
            blackbox9☑
```

The update result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "UPRESULT" ▷
.DATE  83/09/01  10:29:44  TYPE=B  RID=002  83/09/01  JDOE          <   20 LINES>
.     8 LINES FOUND OUT OF    42 LINES
.
*** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*             BLACKBOX9
. . .
.DATE  83/07/22  13:39:36  TYPE=B  RID=002  83/07/15  JDOE
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 OR 741217 LS BLACKBOX9               98755 AMCO
 OR 741210 LS BLACKBOX9               98782 USSC
 IP 741217 LS BLACKBOX9 538993        84781 USSC 741215 741217
 IP 741216 LS BLACKBOX9 563787        82381 FEDS 741215 741216
 IP 741230 LS BLACKBOX9 633287        84361 USSC 741230 741230
 SH 741204 LS BLACKBOX9 714577        64231 AMCO 741201 741203 741204 S8531
 SC 750110 LS BLACKBOX9 735481        97242 USSC 750116
 IP 741215 LS BLACKBOX9 836584        84382 FEDS 741215 741215
                     ..... END REPORT .....
```

You can now change, add, or delete lines in this update result using the functions listed in 6.3.7. When you finish keying in the changes, key in UPD followed by the 1- to 6-character alphanumeric report password (if applicable), and press the XMIT key. See 6.3.7 for information about using the UPDATE RESULTS function.

To delete the lines in the update result from the original report, key in DEL followed by the 1- to 6-character alphanumeric report password (if applicable), and press the XMIT key. See 6.3.6 for information about using the DELETE RESULTS function.

To resume the SEARCH UPDATE function without modifying the original report, key in RSM or press the F1 function key.

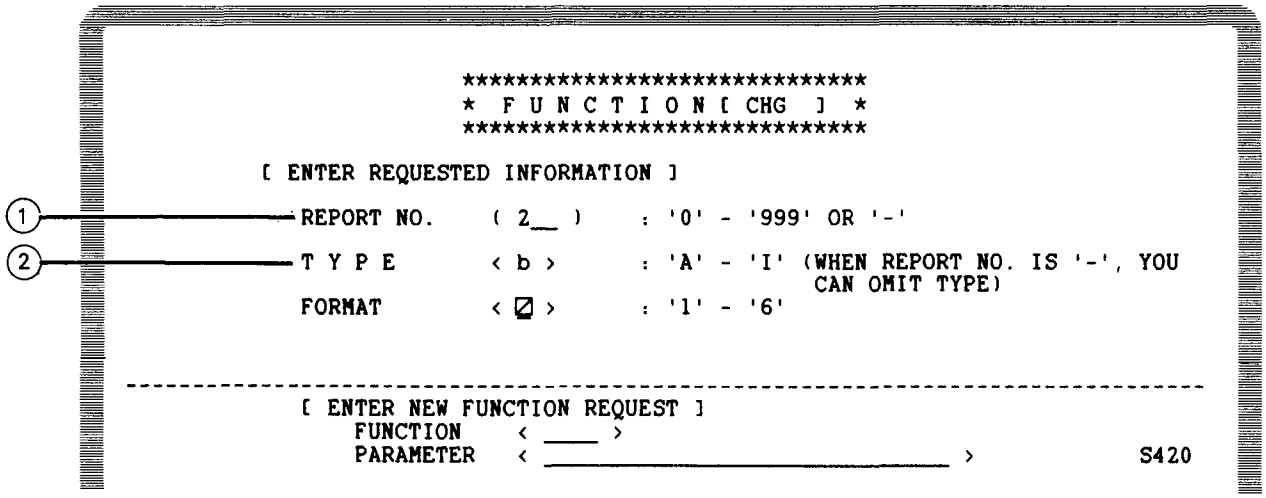
NOTE:

To accelerate updating, use the TOTALIZE function (8.11) to fill fields (=).

7.7. CHANGE FUNCTION (CHG)

The CHANGE function locates and changes a character string in a report or result and displays the result on the screen.

To call this function, key in CHG and press the XMIT key. Figure 7–12 shows the CHANGE function request screen:



NOTES:

(1) Specify the RID number of the report where you want to change the character string. To specify a displayed report or result, key in –.

(2) Specify the alphabetic form type where the report or result belongs.

Figure 7–12. CHANGE Function Request Screen

The fast access format for the CHANGE function is:

```
CHG {rt[,f]}
    {-[,f] }
```

where:

`r`
: Is the RID number.

`t`
: Is the type.

`f`
: Is the format number.

`rt[,f]`
: Specifies a report or result that is not displayed.

`-[,f]`
: Specifies the displayed report or result.

Transmit the entries in Figure 7–12 to display the function mask for report 2B.

To use the CHANGE function, key in the characters you want to change (known as the target string) starting in column 2 of the first line below the mask. Then, starting in column 2 of the second line below the mask, key in the new characters (known as the replacement string). The character string can be up to 32 characters. When you use the F or M option, enter the line type in column 1.

If your target string contains leading or embedded blanks, use the T option (7.7.5.1) to assign the space character to another character value. Otherwise, the space character, which is the default transparent character, matches anything and can produce unwanted results.

The following screen uses the CHANGE function to change BLACKBOX7 entries in the PRODUCT TYPE field to BROWNBOX7:

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 blackbox7
 brownbox7
```

When you press the XMIT key, the target string BLACKBOX7 is changed to the replacement string BROWNBOX7, and the result is displayed on the screen. Figure 7–13 shows the report before using the CHANGE function. Figure 7–14 shows the result screen after you press the XMIT key.

```
LINE▷ 1☑    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷           ▷
.DATE  83/06/20  15:23:42  TYPE=B  RID=002  82/08/11  JDOE        <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

Figure 7–13. Report before Using the CHANGE Function

```
LINE▸ 1     FMT▸    RL▸        SHFT▸       HLD CHR▸     HLD LN▸     PSWD▸ "RESULT" ▸
.DATE  83/08/31  10:11:59  TYPE=B  RID=002  83/08/31  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767         84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768         84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071         84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4                94754 ARCO
 SC 750110 LS BLACKBOX5 675281         97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582         84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327         54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061         54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324         54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367         52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581         89381 INTR 741215 741216
 OR 741210 LS BROWNBOX7                99842 FEDS
 OR 741227 LS BROWNBOX7                99725 INTR
 SC 750108 LS BROWNBOX7 665481         97541 FEDS 750122
 IP 741227 LS BROWNBOX7 733597         84351 AMCO 741227 741227
 SH 741202 LS BROWNBOX7 744627         44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BROWNBOX7 933581         84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8                92788 FEDS
```

Figure 7–14. Report after Using the CHANGE Function

When you finish using the CHANGE function, use the REPLACE (6.3.3) or DUPLICATE (6.3.2) function to save the result.

7.7.1. Options Used with the CHANGE Function

You can use the following options with the CHANGE function:

- **A** Makes changes in all line types. If you do not specify this option, only the tab lines are changed.
- **M** If a replacement occurs within a line, changes the line type.
- **F** Includes the first column of the mask as part of the character string.
- **S** Specifies a line number as the start of a scan search.
- **T** Specifies a transparent character that will match any character in the column where it is used.

Specify these options above the function mask.

7.7.1.1. A Option

The A option specifies that changes apply to all line types within a report.

The following example changes all IP entries to SH in report 1B:

```
a
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 ip
 sh
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  12:46:48  TYPE=B  RID=002  83/06/28  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 SH 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 SH 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 SH 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 SH 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 SH 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 SH 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

7.7.1.2. M Option

The M option includes a line type (tab, *, .) specification as part of the replacement string.

The following example changes all tab lines that contain IP in the ST CD field to SH entries and asterisk (*) lines in report 2B:

```
■
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 ip
*sh☑
```

The result is:

```
LINE▷ 1☑    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  13:08:06  TYPE=B  RID=002  83/06/28  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*SH 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
*SH 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
*SH 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
*SH 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
*SH 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
*SH 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
*SH 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

7.7.1.3. F Option

The F option specifies that the first column of the parameter line of the mask will be used as part of the character string.

The following example changes SH to IP only in lines that contain an asterisk (*) in column 1:

```
f
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
*sh
*ip
```

The result is:

```
LINE▷ 1    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  13:16:48  TYPE=B  RID=002  83/06/28  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
*IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
*IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
*IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
*IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
*IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
*IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
*IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

7.7.1.4. S Option

The S option specifies the starting line in the report, where the CHANGE function begins its search.

The following example changes IP to SH beginning at line 9 of the report:

```
s9
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 ip
 sh
```

The result is:

```
LINE▷ 10    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT"" ▷
.DATE  83/06/28  13:21:08  TYPE=B  RID=002  83/06/28  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 SH 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 SH 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 SH 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 SH 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               92788 FEDS
```

7.7.1.5. T Option

The T option specifies a transparent character. A transparent character is one that matches any character in that position, including blanks. To specify a transparent character, key in a T followed by some character above the function mask. The character following the T is the transparent character.

The following example uses X as the transparent character to change any 5-character numeric entry that begins with 92 to 90000:

```
tx
*ST.STATUS.BY.  PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE  .IN.   TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 92xxx
 90000
```

The result screen shows that the order number on the last line that was 92788 is now changed to 90000.

```
LINE▷ 1    FMT▷   RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷ ▽RESULT▽▷
.DATE  83/06/28  12:40:44  TYPE=B  RID=002  83/06/28  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY.  PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE  .IN.   TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 900001        89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 OR 741230 LS BLACKBOX8               90000 FEDS
```

7.8. MATCH FUNCTION (MA)

The MATCH function compares the contents of selected fields from two different reports. You choose the issuing and receiving reports to match, and then specify the fields you want to match. When the contents of the selected fields are identical (match), the contents of the predetermined fields in the issuing report are moved to the corresponding fields in the result. The result is a duplication of the receiving report, with fields moved in for lines that had matches in the issuing report, and blank-filled fields for lines that did not have matches. The contents of the result vary depending on the options you specify.

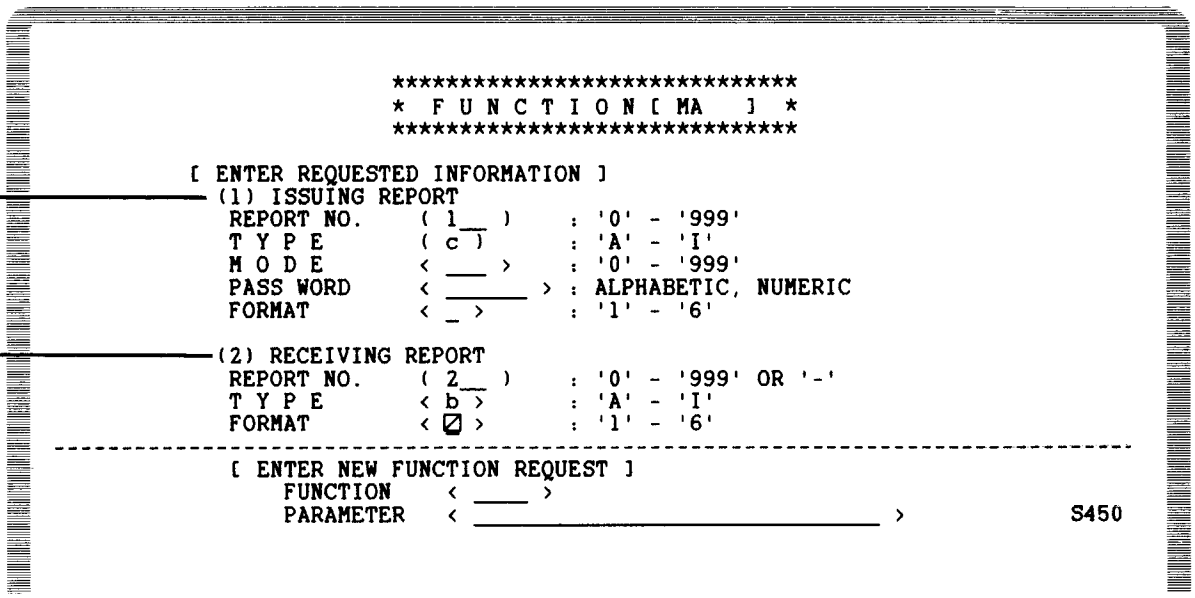
To use the MATCH function, you specify:

1. The issuing and receiving report to match
2. The fields to match
3. The fields to move

NOTES:

1. *Before you use the MATCH function, become familiar with the SEARCH (7.5) and SORT (7.10) functions.*
2. *If you do not presort the issuing or receiving reports, MATCH sorts the two reports internally. For greater efficiency, sort the issuing and receiving reports by the fields in the MATCH function mask before matching. Then, specify the P option in the MATCH mask.*
3. *To save the match result, use the DUPLICATE REPORT function (6.3.2) to copy the result into a new report, or use the REPLACE function (6.3.3) to replace the report with the result.*

To call this function, key in MA and press the XMIT key. Figure 7–15 shows the MATCH function request screen.



NOTES:

(1) Designates the issuing report (RID number, type, format number, and mode if different from the mode of the receiving report). Format number is used for the mask display. You cannot specify – as the issuing report.

(2) Designates the receiving report (RID number, type, format number). To specify a displayed report, key in – for the RID number and omit type. Format number is for the mask and result displays.

Figure 7–15. MATCH Function Request Screen

Complete the MATCH function request screen and press the XMIT key. The next screen displays the function masks of both the issuing and receiving reports. To specify parameters in these function masks:

1. Use numbers 1 through 5 to indicate match fields. You can match up to five fields.

2. Use letters A through M to indicate move fields. You can move up to 13 fields.

3. Enter each parameter in the first column of the field. Number parameters sequentially, starting with number 1. Use the letter A for the first move parameter, and continue without skipping letters.

4. Make each receiving field the same number of characters as its corresponding issuing field. Erase asterisks in the masks to adjust field sizes. If you do not adjust the number of columns in this way, data is moved according to the type of the receiving field (right- or left-justified).

You can use the following options with the MATCH function:

- **D** Omits match information lines (lines matched and match options). See 7.5.5.4. for an example of the D option.
- **F** Do not blank fill move fields in the receiving field on a no-match condition. Normally, receiving fields that are not matched are filled with blanks.
- **M** Displays only matched lines.
- **N** Displays only lines not matched.
- **P** The issuing and receiving reports are already sorted by the fields to match and need not be sorted as part of the MATCH function. Presorting and using the P option improves processing time.

You can character fill move fields in the receiving report on no-match conditions by specifying a character string following the alphabetic parameters in the issuing mask. For example, to fill a date field, enter a831231 in the issuing mask. If the date field is a second move field, enter b831231. If it is the thirteenth move field, enter m831231.

After you transmit the entries made in Figure 7–15, the function masks in Figure 7–16 are displayed. The upper mask is the issuing report (1C), and the lower mask is the receiving report (2B).

The parameters keyed into Figure 7–16 use the MATCH function to compare the PRODUCT TYPE field in the issuing and receiving reports. If the contents of both fields match, the contents of the issuing report move to the same field of the result. Specify the M option above the function mask:

```
■
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.==============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
 1             a
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
            1              a☑
```

Figure 7–16. Function Masks for the Issuing and Receiving Reports

Because the M option is specified, only matched lines are displayed in the result screen. Note that in the following result screen, the receiving field is overlaid with data from the issuing report:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  15:01:31  TYPE=B  RID=002  82/08/11  JDOE          <   50 LINES>
.     41 LINES     MATCHED OUT OF     42 LINES
. M
.  .  .
.  <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY.  PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD.  DATE  .IN.   TYPE    .NUMBER.  COST  .NUMBR.CODE.  PLAN  .ACTUAL.  DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767   13500 84389 AMCO 741223 741224
 IP 741225 LS BLACKBOX1 436768   13500 84390 AMCO 741223 741225
 IP 741219 LS BLACKBOX2 637071   13600 84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4          13800 94754 ARCO
 SC 750110 LS BLACKBOX5 675281   13900 97441 FEDS 750131
 IP 741222 LS BLACKBOX5 737582   13900 84040 AMCO 741222 741222
 SH 741202 LS BLACKBOX6 368061   14000 54438 FEDS 741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324   14000 54232 DICO 741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367   14000 52833 ARCO 741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581   14000 89381 INTR 741215 741216
 OR 741210 LS BLACKBOX7          14100 99842 FEDS
 OR 741227 LS BLACKBOX7          14100 99725 INTR
 SC 750108 LS BLACKBOX7 665481   14100 97541 FEDS 750122
 IP 741227 LS BLACKBOX7 733597   14100 84351 AMCO 741227 741227
 SH 741202 LS BLACKBOX7 744627   14100 44232 INTR 741201 741201 741202 S8531
```

In the next screen, the MATCH function parameters compare the ST CD and CUST CODE in the issuing and receiving reports. If the contents of these fields match, the contents in the ORD QTY field of the issuing report move to the SPC COD field of the result, and the contents of the REQ'D DELIVR field of the issuing report move to the PRODUC PLAN field of the result. In this example, 1D is the issuing report, 2B is the receiving report, and the M option is specified.

```
■
*ST.ORDER .  PRODUCT  .ODR.CUST.   UNIT   .EXTENDED.REQ'D .SALE.                .
*CD.NUMBER.   TYPE    .QTY.CODE.  RETAIL .  RETAIL .DELIVR.REP .     CUSTOMER     .
*==.======.=========.===.====.========.========.======.====.=================.==
 ** ****** ********* *** **** ******** ******** ****** **** ****************** **
 1                    a   2                      b
*ST.STATUS.BY.  PRODUCT  .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD.  DATE  .IN.   TYPE    .NUMBER.  COST  .NUMBR.CODE.  PLAN  .ACTUAL.  DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 1                                          2    b                          a☑
```

The result is:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷  "RESULT" ▷
.DATE  83/06/28  14:57:49  TYPE=B  RID=002  82/08/11  JDOE          <   20 LINES>
.     11 LINES      MATCHED OUT OF      42 LINES
. M
.  .  .
.  <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE  .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN  .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 OR 750110 LS BLACKBOX4                94754 ARCO 750412                        2
 OR 741210 LS BLACKBOX7                99842 FEDS 750312                        1
 OR 741227 LS BLACKBOX7                99725 INTR 750312                        1
 OR 741230 LS BLACKBOX8                92788 FEDS 750312                        1
 OR 741217 LS BLACKBOX9                98755 AMCO 750312                        2
 OR 741210 LS BLACKBOX9                98782 USSC 750312                        1
 OR 741210 LS GREENBOX1                96751 FEDS 750312                        1
 OR 741211 LS GREENBOX4                96652 ARCO 750412                        2
 OR 741210 LS GREENBOX5                99753 DICO 750312                        1
 OR 741228 LS GREENBOX8                94525 FEDS 750312                        1
 OR 740310 LS GREENBOX9                99951 AMCO 750312                        2
                    ..... END REPORT .....
```

In the next example, 1D is the issuing report, 2B is the receiving report, and no options are specified:

```
*ST.ORDER .  PRODUCT  .ODR.CUST.   UNIT   .EXTENDED.REQ'D .SALE.                  .
*CD.NUMBER.    TYPE    .QTY.CODE. RETAIL . RETAIL .DELIVR.REP .     CUSTOMER     .
*==.======.=========.===.====.========.========.======.====.=================.==
 ** ****** ********* *** **** ******** ******** ****** **** ****************** **
 1         2          a                                  b
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC.  SHIP  .SHIP  .SPC.
*CD. DATE  .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN  .ACTUAL. DATE  .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
 1            2                              b                                 a☑
```

In the result screen, the CUST CODE and SPC COD fields are filled with blanks where no matches are found. Where matches are found, data from the ORD QTY field of the issuing report moves to the SPC COD field of the result, and data from the SALE REP field of the issuing report moves to the CUST CODE of the result.

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/28  14:51:52  TYPE=B  RID=002  82/08/11  JDOE          <   51 LINES>
.      9 LINES     MATCHED OUT OF     42 LINES
.
. . .
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.========.======.======.=====.====.======.======.======.=====.===.
 IP 741224 LS BLACKBOX1 436767        84389      741223 741224
 IP 741225 LS BLACKBOX1 436768        84390      741223 741225
 IP 741219 LS BLACKBOX2 637071        84353      741218 741219
 OR 750110 LS BLACKBOX4               94754 LSJ                                1
 SC 750110 LS BLACKBOX5 675281        97441      750131
 IP 741222 LS BLACKBOX5 737582        84040      741222 741222
 SH 741203 LS BLACKBOX0 746327        54237      741201 741202 741203 S8738
 SH 741202 LS BLACKBOX6 368061        54438      741201 741201 741202 S6937
 SH 741209 LS BLACKBOX6 777324        54232      741207 741208 741209 S8538
 SH 741203 LS BLACKBOX6 785367        52833      741201 741202 741203 S8934
 IP 741216 LS BLACKBOX6 926581        89381      741215 741216
 OR 741210 LS BLACKBOX7               99842
 OR 741227 LS BLACKBOX7               99725
 SC 750108 LS BLACKBOX7 665481        97541      750122
 IP 741227 LS BLACKBOX7 733597        84351      741227 741227
```

7.9. MATCH UPDATE FUNCTION (MAU)

The MATCH UPDATE function generates an update result. This update result can then be used by the DELETE RESULTS or UPDATE RESULTS functions to modify the contents of the original receiving report.

NOTE:

Before you use the MATCH UPDATE function, become familiar with the MATCH function (7.8), DELETE RESULTS function (6.3.6), and UPDATE RESULTS function (6.3.7).

To call the MATCH UPDATE function, key in MAU and press the XMIT key. After that, the procedure is identical to the MATCH function procedure.

You can now change, add, or delete lines in the update result using the functions listed in 6.3.7. When you finish updating, key in UPD followed by the 1- to 6-character alphanumeric report password (if applicable), and press the XMIT key. See 6.3.7 for information about using the DELETE RESULTS function.

To delete the lines in the update result from the report, key in DEL followed by the 1- to 6-character alphanumeric report password (where applicable), and press the XMIT key. See 6.3.6 for information about using the DELETE RESULTS function.

To resume the MATCH UPDATE function without modifying the original report, enter RSM.

7.10. SORT FUNCTION (SORT)

The SORT function rearranges the order of lines in a report or result on display, then displays the sorted result.

You can sort data in ascending or descending order. In ascending order, data is arranged from lowest to highest value; a descending sort is the opposite. You can use a numerical sort in combination with an ascending or descending sort. It sorts decimal relationships and sign numbers. Characters, numerals, and special characters are sorted according to the System 80 EBCDIC code table, except when you use the numeric parameter, which sorts numerals in order of their actual values.

You can use up to five fields and sort up to five levels. To designate sort fields, key in the numbers 1 through 5 in the appropriate fields of the function mask. Field 1 is the highest level; field 5 is the lowest level.

Next to the number designating a sort field, key in:

- A or blank to sort the field in ascending order
- D to sort the field in descending order
- N to sort decimal and sign numbers (combine with A, blank, or D)

Specify the N option when you sort a report on fields defined as edit code 1 (numeric). Otherwise, subsequent use of the binary find function (7.4) will not work on these fields.

NOTE:

The size of the load put on the system during a sort is in direct proportion to the number of lines in the report.

To call the SORT function, key in SORT and press the XMIT key. Figure 7–17 shows the SORT function request screen:

```
                    ******************************
                    *  F U N C T I O N [ SORT ]  *
                    ******************************

          [ ENTER REQUESTED INFORMATION ]

(1)  REPORT NO.     ( 2__ )     : '0' - '999' OR '-'
(2)  T Y P E        < b >       : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                            CAN OMIT TYPE)
(3)  FORMAT         < ☑ >       : '1' - '6'


-------------------------------------------------------------------------------
          [ ENTER NEW FUNCTION REQUEST ]
             FUNCTION     < ____ >
             PARAMETER    < ____________________________ >            S420
```

Figure 7–17. SORT Function Request Screen (Part 1 of 2)

NOTES:

(1) This line specifies the RID number of the report to sort. To specify a displayed report or result, key in –.

(2) This line specifies the alphabetic form type where the report or result belongs.

(3) This line specifies the number of the format to use when you want to display the mask or result from a sort.

Figure 7–17. SORT Function Request Screen (Part 2 of 2)

The fast access format for the SORT function is:

```
SORT {rt[,f]}
     {-[,f] }
```

where:

`r`
Is the RID number.

`t`
Is the type.

`f`
Is the format number.

`rt[,f]`
Specifies a report not on display.

`-[,f]`
Specifies a report or result on display.

Example:

To sort report 2B, key in SORT 2B.

In the following example, the SORT function first sorts the PRODUCT TYPE field in ascending order, then sorts the SERIAL NUMBER field in descending order.

```
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE   .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 ** ****** ** ********* ****** ****** ***** **** ****** ****** ****** ***** ***
             1         2dØ
```

The next result lists each product type in ascending order and the serial numbers within product type in descending order. The BLACKBOX1 entry with serial number 436768 appears before the BLACKBOX1 entry with serial number 436767.

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷ ▽▽RESULT▽▽▷
.DATE  83/06/28  14:42:26  TYPE=B  RID=002  82/08/11  JDOE          <   48 LINES>
. <<<  CORPORATE PRODUCTION STATUS  >>>
*ST.STATUS.BY. PRODUCT .SERIAL.PRODUC.ORDER.CUST.PRODUC.PRODUC. SHIP .SHIP .SPC.
*CD. DATE .IN.  TYPE    .NUMBER. COST .NUMBR.CODE. PLAN .ACTUAL. DATE .ORDER.COD.
*==.======.==.=========.======.======.=====.====.======.======.======.=====.===.
 SH 741203 LS BLACKBOX0 746327        54237 FEDS 741201 741202 741203 S8738
 IP 741225 LS BLACKBOX1 436768        84390 AMCO 741223 741225
 IP 741224 LS BLACKBOX1 436767        84389 AMCO 741223 741224
 IP 741219 LS BLACKBOX2 637071        84353 INTR 741218 741219
 OR 750110 LS BLACKBOX4               94754 ARCO
 IP 741222 LS BLACKBOX5 737582        84040 AMCO 741222 741222
 SC 750110 LS BLACKBOX5 675281        97441 FEDS 750131
 IP 741216 LS BLACKBOX6 926581        89381 INTR 741215 741216
 SH 741203 LS BLACKBOX6 785367        52833 ARCO 741201 741202 741203 S8934
 SH 741209 LS BLACKBOX6 777324        54232 DICO 741207 741208 741209 S8538
 SH 741202 LS BLACKBOX6 368061        54438 FEDS 741201 741201 741202 S6937
 IP 741215 LS BLACKBOX7 933581        84381 FEDS 741215 741515
 SH 741202 LS BLACKBOX7 744627        44232 INTR 741201 741201 741202 S8531
 IP 741227 LS BLACKBOX7 733597        84351 AMCO 741227 741227
 SC 750108 LS BLACKBOX7 665481        97541 FEDS 750122
 OR 741210 LS BLACKBOX7               99842 FEDS
 OR 741227 LS BLACKBOX7               99725 INTR
 SH 741203 LS BLACKBOX8 945327        74272 FEDS 741201 741202 741203 S8518
```

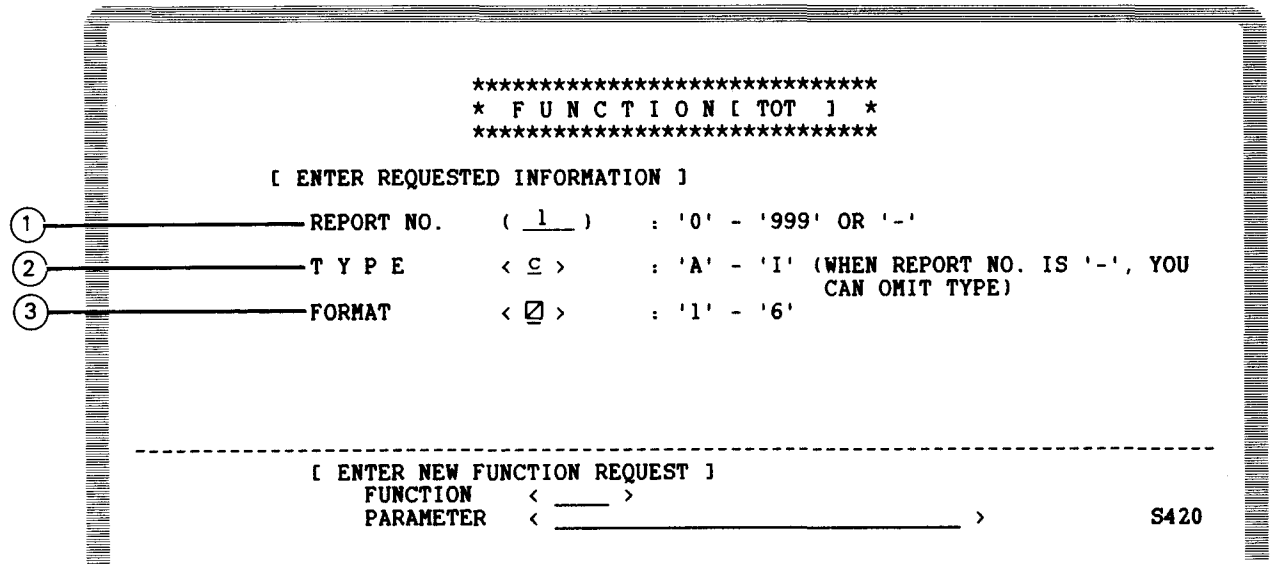
Use the REPLACE function (6.3.3) to create a permanent report arranged by the sort result. Use the DUPLICATE REPORT function (6.3.2) to copy the result into a new report.

8. Calculation Functions

8.1. HOW TO USE THE TOTALIZE FUNCTION

The TOTALIZE function performs arithmetic calculations and move operations on fields within reports or results. This function produces a result.

To call the TOTALIZE function, key in TOT and press the XMIT key. Figure 8–1 shows the TOTALIZE function request screen.



NOTES:

(1) Specify the RID number of the report you want to use. To specify a displayed report or result, key in –.

(2) Specify the alphabetic form type of the report.

(3) Specify the format number of the format you want to use to display the mask and the result of the program.

Figure 8–1. TOTALIZE Function Request Screen

Complete the function request screen and press the XMIT key. The next screen displayed is the function mask for the designated report:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
```

To specify parameters using the TOTALIZE function, key in the parameter in the first column of the appropriate fields, beginning at the first line below the function mask. The parameter entries specify the arithmetic or move operations you want to perform on the fields in the report or result.

Table 8–1 shows the parameters available with the TOTALIZE function.

Table 8–1. Parameters for TOTALIZE Function

Parameter	Function	Parameter	Function
*	Multiplication	S	Subtotal
+	Addition	C	Cumulation
–	Subtraction	+	Entry counting
/	Division	C	Sequencing
=	Total (result of calculation	A	Average
M	Move data field	=	Filling field

NOTE:

Specify up to a maximum of 18 parameters, 16 of which can be pluses or minuses.

Table 8–2 shows the options available with the TOTALIZE function.

Table 8–2. TOTALIZE Function Options

Option	Details of Operation
E	Counts the number of entries
I	Subtotal and total captions are not shown in the result.
O	Only subtotals and totals are shown in the result.
Rn	Conventional rounding, less than n numbers
Un	Rounding upward, less than n numbers
Dn	Rounding downward, less than n numbers
V	Results of vertical summation, averages, and subtotals are displayed under each item (becomes * line).
T	Creates the line type of a V option operation as a tab line

Specify an option above the first line of the function mask.

The following screen shows a simple example using the TOTALIZE function:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                +      -       +        -       +     -        =☑
```

The preceding screen is the function mask for report 1C. Key the parameters into the first position of each field. When you complete all the parameters, press the XMIT key.

The following screen is the result. Note that the total for the fields containing the plus (+) and minus (–) parameters appears in the field containing the equal (=) sign:

```
LINE▷ 1Ø    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
.DATE  83/06/24  12:59:08  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.=======.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100        1         17986.5
 BLACKBOX2     A  13600   17000    23800 2380.00   110        2           18128
 BLACKBOX3     A  13700   17125    23975 2397.50   120        4         18268.5
 BLACKBOX4     B  13800   17250    24150 2415.00   130       10           18405
 BLACKBOX5     B  13900   17375    24325 2432.50   140       50         18507.5
 BLACKBOX6     C  14000   17500    24500 2450.00   150      100           18600
 BLACKBOX7     C  14100   17625    24675 2467.50   160       10         18832.5
 BLACKBOX8     D  14200   17750    24850 2485.00   170       20           18965
 BLACKBOX9     D  14300   17875    25025 2502.50   180       40         19087.5
 GREENBOX1     E  13700   17125    23975 2397.50   200       80         18272.5
 GREENBOX2     E  13900   17375    24325 2432.50   210      160         18467.5
 GREENBOX3     E  14100   17625    24675 2467.50   220        5         18897.5
 GREENBOX4     F  14300   17875    25025 2502.50   230       15         19162.5
 GREENBOX5     G  14500   18125    25375 2537.50   240       25         19427.5
 GREENBOX6     H  14700   18375    25725 2572.50   250        1         19726.5
 GREENBOX7     I  14900   18625    26075 2607.50   260        2           20000
 GREENBOX8     J  15100   18875    26425 2642.50   270        3         20274.5
 GREENBOX9     K  15300   19125    26775 2677.50   280        4         20548.5
```

The information displayed on the screen is a result, and the original report remains unchanged. If you want to save the result, use the DUPLICATE REPORT function (6.3.2) or REPLACE function (6.3.3).

The fast access format for the TOTALIZE function is:

```
TOT {rt[,f]}
    {-[,f] }
```

where:

`r`
: Is the RID number.

`t`
: Is the type.

`f`
: Is the format number.

`rt[,f]`
: Specify if the report is not displayed.

`-[,f]`
: Specify if the report is displayed or to specify the result.

Example:

To use the TOTALIZE function on report 1C, key in TOT 1C.

NOTES:

1. *If data is in the incorrect form within a report, it is regarded as a zero for arithmetic operations.*

2. *See 8.13 for information about how the MAPPER 80 system displays numeric fields you specify with the TOTALIZE function.*

3. *Results produced by the TOTALIZE function can be expressed with up to 15 significant figures. Results that are more than 15 significant figures are truncated.*

8.2. HORIZONTAL ARITHMETIC

Horizontal arithmetic is calculating or moving data on one line and storing the result in a separate field on that line. You can also perform arithmetic operations using constants. For example, you can multiply a field by the same number throughout the report. You can perform only one multiplication, division, or move at a time. You can add or subtract a maximum of 16 fields.

In the following screen, the TOTALIZE function is called for report 1C using the fast access method:

```
LINE▷tot 1c FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷          ▷
.DATE  83/06/29  13:07:49  TYPE=C  RID=001  83/06/29  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE    . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.=======.=======.=====.========.==============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100         1
 BLACKBOX2     A  13600   17000    23800 2380.00   110         2
 BLACKBOX3     A  13700   17125    23975 2397.50   120         4
 BLACKBOX4     B  13800   17250    24150 2415.00   130        10
 BLACKBOX5     B  13900   17375    24325 2432.50   140        50
 BLACKBOX6     C  14000   17500    24500 2450.00   150       100
 BLACKBOX7     C  14100   17625    24675 2467.50   160        10
 BLACKBOX8     D  14200   17750    24850 2485.00   170        20
 BLACKBOX9     D  14300   17875    25025 2502.50   180        40
 GREENBOX1     E  13700   17125    23975 2397.50   200        80
 GREENBOX2     E  13900   17375    24325 2432.50   210       160
 GREENBOX3     E  14100   17625    24675 2467.50   220         5
 GREENBOX4     F  14300   17875    25025 2502.50   230        15
 GREENBOX5     G  14500   18125    25375 2537.50   240        25
 GREENBOX6     H  14700   18375    25725 2572.50   250         1
 GREENBOX7     I  14900   18625    26075 2607.50   260         2
 GREENBOX8     J  15100   18875    26425 2642.50   270         3
 GREENBOX9     K  15300   19125    26775 2677.50   280         4
```

Press the XMIT key to display the function mask for report 1C.

Key in a plus sign (+), minus sign (–), slash (/), or asterisk (*) in the fields where data is totalized. Key in an equal sign (=) in the field where the total is placed.

NOTE:

For multiplication and division, key in:

- *A plus sign in the field containing the dividend or multiplicand*
- *The operator (* or/) in the field containing the divisor or multiplier.*

The following example uses the TOTALIZE function to divide data in the SPACE REQ field (divisor) by the data in the DEMO QUANTITY field (dividend) and places the total (quotient) in the DEMO RESULTS field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.==============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                                 +     /        =☑
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/24  13:01:34  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.==============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100        1             100
 BLACKBOX2     A  13600   17000    23800 2380.00   110        2              55
 BLACKBOX3     A  13700   17125    23975 2397.50   120        4              30
 BLACKBOX4     B  13800   17250    24150 2415.00   130       10              13
 BLACKBOX5     B  13900   17375    24325 2432.50   140       50             2.8
 BLACKBOX6     C  14000   17500    24500 2450.00   150      100             1.5
 BLACKBOX7     C  14100   17625    24675 2467.50   160       10              16
 BLACKBOX8     D  14200   17750    24850 2485.00   170       20             8.5
 BLACKBOX9     D  14300   17875    25025 2502.50   180       40             4.5
 GREENBOX1     E  13700   17125    23975 2397.50   200       80             2.5
 GREENBOX2     E  13900   17375    24325 2432.50   210      160          1.3125
 GREENBOX3     E  14100   17625    24675 2467.50   220        5              44
 GREENBOX4     F  14300   17875    25025 2502.50   230       15 15.333333333333
 GREENBOX5     G  14500   18125    25375 2537.50   240       25             9.6
 GREENBOX6     H  14700   18375    25725 2572.50   250        1             250
 GREENBOX7     I  14900   18625    26075 2607.50   260        2             130
 GREENBOX8     J  15100   18875    26425 2642.50   270        3              90
 GREENBOX9     K  15300   19125    26775 2677.50   280        4              70
```

When the / field (DEMO QUANTITY) contains 0 or blanks as data, the display in the result field is filled with asterisks. This indicates that the operation is impossible (8.13).

You can add and subtract several fields at the same time. The following example uses the TOTALIZE function to add the plus (+) fields, subtract the minus (–) fields, and place the result in the equal (=) field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                +      -       +        -       +     -        =☑
```

You can add, subtract, divide or multiply a constant by entering the number after the parameter symbol. The following example multiplies the contents of the DEMO QUANTITY field by 10 and places the product in the DEMO RESULTS field throughout the report:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                                      *10      =☑
```

To subtract a fixed value, enter plus minus (+–) and the constant. The following example subtracts a fixed value of 10000 from the contents of the SALES COMMISS field and places the result in the DEMO RESULTS field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                        +-10000               =☑
```

8.3. VERTICAL SUMMATION

Vertical summation is adding fields of data in a report and listing the totals of each field at the end of the result.

To perform vertical summation using the fast access method, key in TOT 1C into line 0 and press the XMIT key.

In the function mask, enter a plus sign (+) in the first column of the field to sum vertically. The following screen shows how to vertically sum several fields at the same time:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*----------.-----.------.-------.-------.-------.-----.--------.---------------.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
               +      +       +        +       +     +☑
```

The result displays summary lines at the end of the report. The sum of each specified field is displayed under GRAND-TOTAL. Field titles from the header lines preface grand totals:

```
LINE▷ 23☑  FMT▷   RL▷ -     SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT"" ▷
 GREENBOX9     K  15300   19125    26775 2677.50   280        4
.
.GRAND-TOTAL  -
. PRODUC  COST  = 255600
.  WHOLE   SALE$  = 319500
.  RETAIL    $$$$   = 447300
.  SALES  COMMISS = 44730
. SPACE  REQ  = 3420
.   DEMO   QUANTITY = 532
                    ..... END REPORT .....
```

You can specify TOTALIZE parameters only on one line of the mask. However, you can specify TOTALIZE parameters on two lines when you perform horizontal arithmetic and vertical summation at the same time.

For example, to find the total storage space required for one package product, multiply the SPACE REQ field by the DEMO QUANTITY field. The sum of the DEMO QUANTITY fields equals the total storage space required for all packaged products. To compute this sum, key in a plus sign (+) below the equal sign (=) in the function mask, as shown in the following screen:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                                +     *        =
                                                               +☐
```

The result displays the grand total of the DEMO RESULTS field:

```
LINE▷ 23☐  FMT▷   RL▷ -     SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
 GREENBOX9     K  15300   19125    26775 2677.50   280        4             1120
.
.GRAND-TOTAL  -
.                  DEMO RESULTS   = 99150
                     ..... END REPORT .....
```

8.4. AVERAGING

The TOTALIZE function also computes averages for numeric fields. The function adds all the line entries in a field, computes the average, and displays the average at the end of the result. You can average a maximum of 16 fields each time you use the averaging parameter.

To compute averages, key in TOT 1C and press the XMIT key to display the function mask. In the function mask, key in an A in the first column of the fields you want to average. Then, press the XMIT key.

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                 a      a       a        a       a     a☐
```

The result displays the averages at the end of the report:

```
LINE▷ 23☑   FMT▷    RL▷ -      SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷ ""RESULT"" ▷
 GREENBOX9      K  15300    19125     26775 2677.50    280         4
.
.AVERAGE
. PRODUC  COST  = 14200
.  WHOLE   SALE$  = 17750
.  RETAIL    $$$$   = 24850
.  SALES  COMMISS = 2485
. SPACE  REQ  = 190
.   DEMO   QUANTITY = 29.5555555555555
                     ..... END REPORT .....
```

The lines in the previous result are temporary, but they are displayed at the end of the result as long as you continue to use this result for other TOTALIZE functions.

NOTE:

Averaging is a vertical calculation; you cannot use a horizontal operation when you use this function.

8.5. SUBTOTALING

Subtotals are sums of data for groups of related lines. The TOTALIZE function groups these lines by a key field. Before you use subtotaling, sort the report or result by a key field. Then, use subtotaling to calculate subtotals for another field. The subtotals are displayed each time the key field changes.

You can subtotal up to 16 fields, but you can subtotal only one level at a time (i.e., only one key field). To subtotal further levels, you must call the TOTALIZE function from the result on display.

The TOTALIZE function lists data lines in sequence until the key field (S in the function mask) changes. The function then inserts subtotal lines as comment lines, identifies the key field, and sums the totalize fields (the + fields in the function mask).

NOTE:

The key field cannot exceed 24 columns.

To subtotal, key in TOT 1C and press the XMIT key to display the function mask. In the function mask, key in a plus sign (+) in the fields you want to totalize and an S in the SUB KEY field. You can key in a plus sign in up to 16 fields to calculate multiple subtotals in one request.

The following example calculates subtotals for the DEMO QUANTITY field each time the SUB KEY field changes.

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*.........:.....:......:.......:........:.......:.....:........:...............:
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
           s                                                  +☑
```

The following result displays a separate subtotal line after each group of data lines with the same key field:

```
LINE▷ 1☑    FMT▷    RL▷        SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/06/24  13:10:51  TYPE=C  RID=001  82/08/11  JDOE          <   46 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*.........:.....:......:.......:........:.......:.....:........:...............:
 BLACKBOX1      A  13500   16875    23625 2362.50   100         1
 BLACKBOX2      A  13600   17000    23800 2380.00   110         2
 BLACKBOX3      A  13700   17125    23975 2397.50   120         4
.SUB-TOTAL      SUB   KEY  =       A
.   DEMO    QUANTITY = 7
 BLACKBOX4      B  13800   17250    24150 2415.00   130        10
 BLACKBOX5      B  13900   17375    24325 2432.50   140        50
.SUB-TOTAL      SUB   KEY  =       B
.   DEMO    QUANTITY = 60
 BLACKBOX6      C  14000   17500    24500 2450.00   150       100
 BLACKBOX7      C  14100   17625    24675 2467.50   160        10
.SUB-TOTAL      SUB   KEY  =       C
.   DEMO    QUANTITY = 110
 BLACKBOX8      D  14200   17750    24850 2485.00   170        20
 BLACKBOX9      D  14300   17875    25025 2502.50   180        40
.SUB-TOTAL      SUB   KEY  =       D
.   DEMO    QUANTITY = 60
 GREENBOX1      E  13700   17125    23975 2397.50   200        80
```

8.6. CUMULATION

Cumulation is the process of repeatedly adding the quantity from one or more fields to a total (cumulative) in another field, and then saving the total.

You can also perform subcumulation, or cumulation until a key field value changes, so that the result yields two result fields.

To use cumulation, first key in TOT 1C and press the XMIT key to display the function mask. In the function mask, key a C in the field to contain the cumulative figures, and key arithmetic symbols in fields used to compute the cumulative result. The format is the same as for horizontal arithmetic, except that a C replaces the equal sign.

In the following example, the numeric entries from the SPACE REQ field are cumulatively added and displayed in the DEMO RESULTS field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                                +             c☑
```

The result displays the cumulative result or a running total of the computation in the C column:

```
LINE▷ 1☑    FMT▷    RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷  ▽RESULT▽ ▷
.DATE  83/06/24  13:13:21  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100        1             100
 BLACKBOX2     A  13600   17000    23800 2380.00   110        2             210
 BLACKBOX3     A  13700   17125    23975 2397.50   120        4             330
 BLACKBOX4     B  13800   17250    24150 2415.00   130       10             460
 BLACKBOX5     B  13900   17375    24325 2432.50   140       50             600
 BLACKBOX6     C  14000   17500    24500 2450.00   150      100             750
 BLACKBOX7     C  14100   17625    24675 2467.50   160       10             910
 BLACKBOX8     D  14200   17750    24850 2485.00   170       20            1080
 BLACKBOX9     D  14300   17875    25025 2502.50   180       40            1260
 GREENBOX1     E  13700   17125    23975 2397.50   200       80            1460
 GREENBOX2     E  13900   17375    24325 2432.50   210      160            1670
 GREENBOX3     E  14100   17625    24675 2467.50   220        5            1890
 GREENBOX4     F  14300   17875    25025 2502.50   230       15            2120
 GREENBOX5     G  14500   18125    25375 2537.50   240       25            2360
 GREENBOX6     H  14700   18375    25725 2572.50   250        1            2610
 GREENBOX7     I  14900   18625    26075 2607.50   260        2            2870
 GREENBOX8     J  15100   18875    26425 2642.50   270        3            3140
 GREENBOX9     K  15300   19125    26775 2677.50   280        4            3420
```

8.6.1. Group and Consecutive Cumulation

You can combine the cumulation process with the subtotal parameter (S) to calculate cumulative quantities for both subtotal fields and the entire report.

To use these functions together, display the appropriate function mask and key in:

- S to designate the subtotaling key field
- Plus sign (+) in the field you want to cumulate
- Equal sign (=) to designate the field where the cumulative subtotals are displayed
- C in the field where consecutive cumulations of the + fields are displayed without reference to the S field key. The C parameter is optional.

The following example calculates subcumulative figures from the SPACE REQ field and displays them in the DEMO QUANTITY field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
           s                                     +     =        c☐
```

Consecutive cumulations appear in the DEMO RESULTS field. New subcumulative figures appear in the DEMO QUANTITY field each time the SUB KEY field changes:

```
LINE▷ 1☐    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT""▷
.DATE  83/06/24  13:15:39  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1      A  13500   16875    23625 2362.50   100      100             100
 BLACKBOX2      A  13600   17000    23800 2380.00   110      210             210
 BLACKBOX3      A  13700   17125    23975 2397.50   120      330             330
 BLACKBOX4      B  13800   17250    24150 2415.00   130      130             460
 BLACKBOX5      B  13900   17375    24325 2432.50   140      270             600
 BLACKBOX6      C  14000   17500    24500 2450.00   150      150             750
 BLACKBOX7      C  14100   17625    24675 2467.50   160      310             910
 BLACKBOX8      D  14200   17750    24850 2485.00   170      170            1080
 BLACKBOX9      D  14300   17875    25025 2502.50   180      350            1260
 GREENBOX1      E  13700   17125    23975 2397.50   200      200            1460
 GREENBOX2      E  13900   17375    24325 2432.50   210      410            1670
 GREENBOX3      E  14100   17625    24675 2467.50   220      630            1890
 GREENBOX4      F  14300   17875    25025 2502.50   230      230            2120
 GREENBOX5      G  14500   18125    25375 2537.50   240      240            2360
 GREENBOX6      H  14700   18375    25725 2572.50   250      250            2610
 GREENBOX7      I  14900   18625    26075 2607.50   260      260            2870
 GREENBOX8      J  15100   18875    26425 2642.50   270      270            3140
 GREENBOX9      K  15300   19125    26775 2677.50   280      280            3420
```

8.7. ENTRY COUNTING

Entry counting counts the number of data entries in a field. You use entry counting in combination with other vertical calculations (vertical summation, averaging, subtotaling).

To perform entry counting, key in E above the function mask and the plus sign (+) in the field you want to use for the vertical calculation.

The next screen shows both vertical summation and entry counting:

```
e
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                +☐
```

The result displays the total for the PRODUC COST together with the number of entries:

```
LINE▷ 12☐  FMT▷   RL▷ -     SHFT▷      HLD CHR▷    HLD LN▷ 6  PSWD▷ ""RESULT""▷
.DATE  83/06/24  13:18:01  TYPE=C  RID=001  82/08/11  JDOE          <   28 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1      A  13500   16875    23625 2362.50   100         1
 BLACKBOX7      C  14100   17625    24675 2467.50   160        10
 BLACKBOX8      D  14200   17750    24850 2485.00   170        20
 BLACKBOX9      D  14300   17875    25025 2502.50   180        40
 GREENBOX1      E  13700   17125    23975 2397.50   200        80
 GREENBOX2      E  13900   17375    24325 2432.50   210       160
 GREENBOX3      E  14100   17625    24675 2467.50   220         5
 GREENBOX4      F  14300   17875    25025 2502.50   230        15
 GREENBOX5      G  14500   18125    25375 2537.50   240        25
 GREENBOX6      H  14700   18375    25725 2572.50   250         1
 GREENBOX7      I  14900   18625    26075 2607.50   260         2
 GREENBOX8      J  15100   18875    26425 2642.50   270         3
 GREENBOX9      K  15300   19125    26775 2677.50   280         4
.
.GRAND-TOTAL  -
.ENTRIES =      18
. PRODUC  COST  = 255600
                     ..... END REPORT .....
```

NOTE:

The results of averaging and vertical summation are displayed at the end of the report. To see the results, tab to the RL field and press the XMIT key to roll up the screen.

8.8. SEQUENCING

Sequencing is the sequential numbering of data lines. The sequence begins with the number 1 and increments by 1 for each successive line.

To use sequencing, key in TOT 1C and press the XMIT key to display the function mask. Then, key in E above the mask and C in the field where you want to sequence.

The following example sequences the SUB KEY field:

```
e
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
           c☑
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
.DATE  83/06/24  11:37:21  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1      1  13500   16875    23625 2362.50   100         1
 BLACKBOX2      2  13600   17000    23800 2380.00   110         2
 BLACKBOX3      3  13700   17125    23975 2397.50   120         4
 BLACKBOX4      4  13800   17250    24150 2415.00   130        10
 BLACKBOX5      5  13900   17375    24325 2432.50   140        50
 BLACKBOX6      6  14000   17500    24500 2450.00   150       100
 BLACKBOX7      7  14100   17625    24675 2467.50   160        10
 BLACKBOX8      8  14200   17750    24850 2485.00   170        20
 BLACKBOX9      9  14300   17875    25025 2502.50   180        40
 GREENBOX1     10  13700   17125    23975 2397.50   200        80
 GREENBOX2     11  13900   17375    24325 2432.50   210       160
 GREENBOX3     12  14100   17625    24675 2467.50   220         5
 GREENBOX4     13  14300   17875    25025 2502.50   230        15
 GREENBOX5     14  14500   18125    25375 2537.50   240        25
 GREENBOX6     15  14700   18375    25725 2572.50   250         1
 GREENBOX7     16  14900   18625    26075 2607.50   260         2
 GREENBOX8     17  15100   18875    26425 2642.50   270         3
 GREENBOX9     18  15300   19125    26775 2677.50   280         4
```

8.8.1. Numbering of Respective Groups

You can combine sequencing with the subtotal parameter (S) to sequence a field within a key group. The sequence number starts over at each change of key.

To use these parameters together, key in E as the option in the first line above the mask, key in an S parameter below the function mask to designate the key field, and key in an equal sign (=) in the field that receives the numbering.

In the following example, the SUB KEY field is the key field, and the PRODUC COST field receives the numbering:

```
e
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
           s     =☑
```

The result is:

```
LINE▷ 1     FMT▷    RL▷        SHFT▷       HLD CHR▷     HLD LN▷     PSWD▷ ''RESULT'' ▷
.DATE  83/06/24  11:42:36  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.   DEMO  .                .
*  TYPE    . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.=======.=======.=====.========.===============.
 BLACKBOX1      A       1   16875    23625 2362.50   100         1
 BLACKBOX2      A       2   17000    23800 2380.00   110         2
 BLACKBOX3      A       3   17125    23975 2397.50   120         4
 BLACKBOX4      B       1   17250    24150 2415.00   130        10
 BLACKBOX5      B       2   17375    24325 2432.50   140        50
 BLACKBOX6      C       1   17500    24500 2450.00   150       100
 BLACKBOX7      C       2   17625    24675 2467.50   160        10
 BLACKBOX8      D       1   17750    24850 2485.00   170        20
 BLACKBOX9      D       2   17875    25025 2502.50   180        40
 GREENBOX1      E       1   17125    23975 2397.50   200        80
 GREENBOX2      E       2   17375    24325 2432.50   210       160
 GREENBOX3      E       3   17625    24675 2467.50   220         5
 GREENBOX4      F       1   17875    25025 2502.50   230        15
 GREENBOX5      G       1   18125    25375 2537.50   240        25
 GREENBOX6      H       1   18375    25725 2572.50   250         1
 GREENBOX7      I       1   18625    26075 2607.50   260         2
 GREENBOX8      J       1   18875    26425 2642.50   270         3
 GREENBOX9      K       1   19125    26775 2677.50   280         4
```

8.9. NUMERIC ROUNDING

You can produce results using horizontal arithmetic, vertical summation, averaging, subtotaling, and cumulation that are rounded normally, upward or downward.

To specify rounding, key in the R, U, or D option and the number of significant figures to which you can round the result. The R option performs standard rounding, the U option performs upward rounding, and the D option performs downward rounding.

Table 8–3 shows the 12 increments of rounding that you can use with the R, U, or D option.

Table 8–3. Twelve Increments of Rounding Used with R, U, and D Options

1	=	Nearest unit	.0	=	Nearest 10th
10	=	Nearest 10	.00	=	Nearest 100th
100	=	Nearest 100	.000	=	Nearest 1000th
1000	=	Nearest 1000	.0000	=	Nearest 10,000th
10000	=	Nearest 10,000	.00000	=	Nearest 100,000th
100000	=	Nearest 100,000	.000000	=	Nearest 1,000,000th

To use the R option:

- Display the function mask for the report you want to process.
- Key in an R, U, or D and the unit of rounding above the mask.
- Press the TAB key to place the cursor beneath the function mask.
- Key in the parameters for the arithmetic or move operations. Specify the fields to round with an equal (=) sign.

To display the function mask for rounding figures in report 1C, key in TOT 1C and press the XMIT key.

In the following example, round the figure in the RETAIL $$$$ field to the nearest thousand (e.g., 24000=24) and display it in the DEMO RESULTS field:

```
r1000
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*.........:.....:......:.......:........:.......:.....:........:...............:
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                  +                                 =☑
```

The result is:

```
LINE▷ 1☑   FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT"" ▷
.DATE  83/06/24  11:45:24  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*.........:.....:......:.......:........:.......:.....:........:...............:
 BLACKBOX1      A  13500   16875    23625 2362.50   100        1              24
 BLACKBOX2      A  13600   17000    23800 2380.00   110        2              24
 BLACKBOX3      A  13700   17125    23975 2397.50   120        4              24
 BLACKBOX4      B  13800   17250    24150 2415.00   130       10              24
 BLACKBOX5      B  13900   17375    24325 2432.50   140       50              24
 BLACKBOX6      C  14000   17500    24500 2450.00   150      100              25
 BLACKBOX7      C  14100   17625    24675 2467.50   160       10              25
 BLACKBOX8      D  14200   17750    24850 2485.00   170       20              25
 BLACKBOX9      D  14300   17875    25025 2502.50   180       40              25
 GREENBOX1      E  13700   17125    23975 2397.50   200       80              24
 GREENBOX2      E  13900   17375    24325 2432.50   210      160              24
 GREENBOX3      E  14100   17625    24675 2467.50   220        5              25
 GREENBOX4      F  14300   17875    25025 2502.50   230       15              25
 GREENBOX5      G  14500   18125    25375 2537.50   240       25              25
 GREENBOX6      H  14700   18375    25725 2572.50   250        1              26
 GREENBOX7      I  14900   18625    26075 2607.50   260        2              26
 GREENBOX8      J  15100   18875    26425 2642.50   270        3              26
 GREENBOX9      K  15300   19125    26775 2677.50   280        4              27
```

You can use two methods to round below the decimal point:

1. Create the result containing the decimal numbers, call the function mask, and perform the rounding on the result.

2. Create the decimal numbers and round in the same operation.

The first method requires two steps: creating the decimal numbers and then rounding them. For example, the following function mask divides the figures in the RETAIL $$$$ field by 1000000 and places the result in the DEMO QUANTITY field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                              /1000000              =☑
```

The following result screen contains the computed decimal numbers:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT""▷
.DATE  83/06/24  12:38:38  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100 0.023625
 BLACKBOX2     A  13600   17000    23800 2380.00   110   0.0238
 BLACKBOX3     A  13700   17125    23975 2397.50   120 0.023975
 BLACKBOX4     B  13800   17250    24150 2415.00   130  0.02415
 BLACKBOX5     B  13900   17375    24325 2432.50   140 0.024325
 BLACKBOX6     C  14000   17500    24500 2450.00   150   0.0245
 BLACKBOX7     C  14100   17625    24675 2467.50   160 0.024675
 BLACKBOX8     D  14200   17750    24850 2485.00   170  0.02485
 BLACKBOX9     D  14300   17875    25025 2502.50   180 0.025025
 GREENBOX1     E  13700   17125    23975 2397.50   200 0.023975
 GREENBOX2     E  13900   17375    24325 2432.50   210 0.024325
 GREENBOX3     E  14100   17625    24675 2467.50   220 0.024675
 GREENBOX4     F  14300   17875    25025 2502.50   230 0.025025
 GREENBOX5     G  14500   18125    25375 2537.50   240 0.025375
 GREENBOX6     H  14700   18375    25725 2572.50   250 0.025725
 GREENBOX7     I  14900   18625    26075 2607.50   260 0.026075
 GREENBOX8     J  15100   18875    26425 2642.50   270 0.026425
 GREENBOX9     K  15300   19125    26775 2677.50   280 0.026775
```

Next, key in TOT – in line 0 and press the XMIT key to display the function mask. The specifications in the following function mask:

- round the decimal results in the DEMO QUANTITY field of the previous result to three decimal places; and
- display them in the DEMO RESULTS field.

```
r.000
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                                      +        =
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT""▷
.DATE  83/06/28  14:32:18  TYPE=C  RID=001  87/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100 0.023625           0.024
 BLACKBOX2     A  13600   17000    23800 2380.00   110   0.0238           0.024
 BLACKBOX3     A  13700   17125    23975 2397.50   120 0.023975           0.024
 BLACKBOX4     B  13800   17250    24150 2415.00   130  0.02415           0.024
 BLACKBOX5     B  13900   17375    24325 2432.50   140 0.024325           0.024
 BLACKBOX6     C  14000   17500    24500 2450.00   150   0.0245           0.025
 BLACKBOX7     C  14100   17625    24675 2467.50   160 0.024675           0.025
 BLACKBOX8     D  14200   17750    24850 2485.00   170  0.02485           0.025
 BLACKBOX9     D  14300   17875    25025 2502.50   180 0.025025           0.025
 GREENBOX1     E  13700   17125    23975 2397.50   200 0.023975           0.024
 GREENBOX2     E  13900   17375    24325 2432.50   210 0.024325           0.024
 GREENBOX3     E  14100   17625    24675 2467.50   220 0.024675           0.025
 GREENBOX4     F  14300   17875    25025 2502.50   230 0.025025           0.025
 GREENBOX5     G  14500   18125    25375 2537.50   240 0.025375           0.025
 GREENBOX6     H  14700   18375    25725 2572.50   250 0.025725           0.026
 GREENBOX7     I  14900   18625    26075 2607.50   260 0.026075           0.026
 GREENBOX8     J  15100   18875    26425 2642.50   270 0.026425           0.026
 GREENBOX9     K  15300   19125    26775 2677.50   280 0.026775           0.027
```

The second method of rounding prepares and rounds the numbers in one step. The following example uses only one operation to calculate the same results in the DEMO RESULTS field as in the previous example:

```
r.000
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                /1000000                        =
```

8.9.1. Rounding Down

The D option performs downward rounding. Specify the D option in the same way as the R option (8.9).

For example, use the D option in the following function mask to round down the figure in the RETAIL $$$$ field to the nearest thousand (1000) and display it in the DEMO RESULTS field:

```
d1000
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                +                               =☑
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷       HLD CHR▷    HLD LN▷    PSWD▷ "RESULT" ▷
.DATE  83/08/10  15:41:15  TYPE=C  RID=001  83/07/22  JDOE          <   24 LINES▷
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100        1              23
 BLACKBOX2     A  13600   17000    23800 2380.00   110        2              23
 BLACKBOX3     A  13700   17125    23975 2397.50   120        4              23
 BLACKBOX4     B  13800   17250    24150 2415.00   130       10              24
 BLACKBOX5     B  13900   17375    24325 2432.50   140       50              24
 BLACKBOX6     C  14000   17500    24500 2450.00   150      100              24
 BLACKBOX7     C  14100   17625    24675 2467.50   160       10              24
 BLACKBOX8     D  14200   17750    24850 2485.00   170       20              24
 BLACKBOX9     D  14300   17875    25025 2502.50   180       40              25
 GREENBOX1     E  13700   17125    23975 2397.50   200       80              23
 GREENBOX2     E  13900   17375    24325 2432.50   210      160              24
 GREENBOX3     E  14100   17625    24675 2467.50   220        5              24
 GREENBOX4     F  14300   17875    25025 2502.50   230       15              25
 GREENBOX5     G  14500   18125    25375 2537.50   240       25              25
 GREENBOX6     H  14700   18375    25725 2572.50   250        1              25
 GREENBOX7     I  14900   18625    26075 2607.50   260        2              26
 GREENBOX8     J  15100   18875    26425 2642.50   270        3              26
 GREENBOX9     K  15300   19125    26775 2677.50   280        4              26
```

8.9.2. Rounding Up

The U option performs upward rounding. Specify the U option in the same way as the R or D options (8.9).

For example, the U option in the following example rounds up the figure in the RETAIL $$$$ field to the nearest thousand (1000) and displays it in the DEMO RESULTS field:

```
u1000
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*.........:.....:......:.......:........:.......:.....:........:...............:
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                 +                                 =⍁
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ "RESULT"▷
.DATE  83/08/10  15:37:38  TYPE=C  RID=001  83/07/22  JDOE        <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*.........:.....:......:.......:........:.......:.....:........:...............:
 BLACKBOX1     A  13500   16875    23625 2362.50   100        1              24
 BLACKBOX2     A  13600   17000    23800 2380.00   110        2              24
 BLACKBOX3     A  13700   17125    23975 2397.50   120        4              24
 BLACKBOX4     B  13800   17250    24150 2415.00   130       10              25
 BLACKBOX5     B  13900   17375    24325 2432.50   140       50              25
 BLACKBOX6     C  14000   17500    24500 2450.00   150      100              25
 BLACKBOX7     C  14100   17625    24675 2467.50   160       10              25
 BLACKBOX8     D  14200   17750    24850 2485.00   170       20              25
 BLACKBOX9     D  14300   17875    25025 2502.50   180       40              26
 GREENBOX1     E  13700   17125    23975 2397.50   200       80              24
 GREENBOX2     E  13900   17375    24325 2432.50   210      160              25
 GREENBOX3     E  14100   17625    24675 2467.50   220        5              25
 GREENBOX4     F  14300   17875    25025 2502.50   230       15              26
 GREENBOX5     G  14500   18125    25375 2537.50   240       25              26
 GREENBOX6     H  14700   18375    25725 2572.50   250        1              26
 GREENBOX7     I  14900   18625    26075 2607.50   260        2              27
 GREENBOX8     J  15100   18875    26425 2642.50   270        3              27
 GREENBOX9     K  15300   19125    26775 2677.50   280        4              27
```

8.10. MOVING FIELDS OF DATA

To move data from one field to another, key in TOT 1C and press the XMIT key to display the function mask.

NOTE:

When you move data, the issuing and receiving fields must be of the same length. If they are not the same length, you can correct that by deleting the leading asterisks under the field headers of the longer field.

In the function mask, key in an M in the field you want to move and an equal sign (=) in the field receiving the data. The specifications you key in the following function mask moves the data in the RETAIL $$$$ field to the DEMO QUANTITY field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ****************
                              M                          =
```

In the result, the issuing and receiving fields (RETAIL $$$$ and DEMO QUANTITY) contain identical data:

```
LINE▷ 1    FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ▽RESULT△ ▷
.DATE  83/06/24  12:46:59  TYPE=C  RID=001  82/08/11  JDOE        <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1      A  13500   16875    23625 2362.50   100    23625
 BLACKBOX2      A  13600   17000    23800 2380.00   110    23800
 BLACKBOX3      A  13700   17125    23975 2397.50   120    23975
 BLACKBOX4      B  13800   17250    24150 2415.00   130    24150
 BLACKBOX5      B  13900   17375    24325 2432.50   140    24325
 BLACKBOX6      C  14000   17500    24500 2450.00   150    24500
 BLACKBOX7      C  14100   17625    24675 2467.50   160    24675
 BLACKBOX8      D  14200   17750    24850 2485.00   170    24850
 BLACKBOX9      D  14300   17875    25025 2502.50   180    25025
 GREENBOX1      E  13700   17125    23975 2397.50   200    23975
 GREENBOX2      E  13900   17375    24325 2432.50   210    24325
 GREENBOX3      E  14100   17625    24675 2467.50   220    24675
 GREENBOX4      F  14300   17875    25025 2502.50   230    25025
 GREENBOX5      G  14500   18125    25375 2537.50   240    25375
 GREENBOX6      H  14700   18375    25725 2572.50   250    25725
 GREENBOX7      I  14900   18625    26075 2607.50   260    26075
 GREENBOX8      J  15100   18875    26425 2642.50   270    26425
 GREENBOX9      K  15300   19125    26775 2677.50   280    26775
```

8.11. FILLING FIELDS

You can specify values to fill fields throughout a report or result. This feature of the TOTALIZE function is especially useful with the SEARCH UPDATE or MATCH UPDATE function. You can fill in dates, status codes, and dollar amounts in the result for updating the report.

To fill fields, display the function mask of the report you want to use. In the function mask, key in an equal sign (=) in the first column of the field you want to fill. All spaces remaining in the field, including the space before the next field, are significant; that is, because the equal sign occupies the first column of the field, the space preceding the next field is included as part of the parameter field. To right justify a value, key in its rightmost number in the space preceding the next field.

In the following example, the SPACE REQ field is filled with 500, and the DEMO QUANTITY field is filled with zeros. To right justify 500 in the SPACE REQ field, key in 50 below the last two asterisks and key in the remaining zero in the space preceding the DEMO QUANTITY field:

```
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                                                =  500=00000000
```

The result is:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ""RESULT""▷
.DATE  83/06/24  12:49:27  TYPE=C  RID=001  82/08/11  JDOE          <   24 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   500 00000000
 BLACKBOX2     A  13600   17000    23800 2380.00   500 00000000
 BLACKBOX3     A  13700   17125    23975 2397.50   500 00000000
 BLACKBOX4     B  13800   17250    24150 2415.00   500 00000000
 BLACKBOX5     B  13900   17375    24325 2432.50   500 00000000
 BLACKBOX6     C  14000   17500    24500 2450.00   500 00000000
 BLACKBOX7     C  14100   17625    24675 2467.50   500 00000000
 BLACKBOX8     D  14200   17750    24850 2485.00   500 00000000
 BLACKBOX9     D  14300   17875    25025 2502.50   500 00000000
 GREENBOX1     E  13700   17125    23975 2397.50   500 00000000
 GREENBOX2     E  13900   17375    24325 2432.50   500 00000000
 GREENBOX3     E  14100   17625    24675 2467.50   500 00000000
 GREENBOX4     F  14300   17875    25025 2502.50   500 00000000
 GREENBOX5     G  14500   18125    25375 2537.50   500 00000000
 GREENBOX6     H  14700   18375    25725 2572.50   500 00000000
 GREENBOX7     I  14900   18625    26075 2607.50   500 00000000
 GREENBOX8     J  15100   18875    26425 2642.50   500 00000000
 GREENBOX9     K  15300   19125    26775 2677.50   500 00000000
```

You can delete or add asterisks in the mask when you want to control the filling of characters in a field. When you add asterisks, the end of the field is represented by the last asterisk.

To fill a field with spaces, key in an equal sign in the first position of the field.

NOTE:

You can fill more than one field at a time in the function mask, but you cannot use the move function with other arithmetic functions.

8.12. MISCELLANEOUS OPTIONS (I, O, V, AND T OPTIONS)

In addition to the options already described, there are several others available with the TOTALIZE function: the I, O, V, and T options.

8.12.1. I Option

The I option eliminates the captions on the results of averaging, subtotaling, and vertical summation. For example, when you add the I option to the specifications in the mask from 8.5, the captions for the subtotals are eliminated in the subsequent result screen:

```
i
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ****************
           s                                                +☐
```

The following result screen does not contain subtotal captions:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
.DATE  83/06/28  14:18:17  TYPE=C  RID=001  82/08/11  JDOE          <   46 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 BLACKBOX1     A  13500   16875    23625 2362.50   100        1
 BLACKBOX2     A  13600   17000    23800 2380.00   110        2
 BLACKBOX3     A  13700   17125    23975 2397.50   120        4
.SUB-TOTAL          A
. 7
 BLACKBOX4     B  13800   17250    24150 2415.00   130       10
 BLACKBOX5     B  13900   17375    24325 2432.50   140       50
.SUB-TOTAL          B
. 60
 BLACKBOX6     C  14000   17500    24500 2450.00   150      100
 BLACKBOX7     C  14100   17625    24675 2467.50   160       10
.SUB-TOTAL          C
. 110
 BLACKBOX8     D  14200   17750    24850 2485.00   170       20
 BLACKBOX9     D  14300   17875    25025 2502.50   180       40
.SUB-TOTAL          D
. 60
 GREENBOX1     E  13700   17125    23975 2397.50   200       80
```

8.12.2. O Option

The O option omits all data from the result, except subtotal and grand total information.

The following example uses the O option with the mask from 8.3:

```
o
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                 +      +       +        +       +     +☑
```

The result displays only the grand totals:

```
LINE▷ 1     FMT▷   RL▷       SHFT▷      HLD CHR▷    HLD LN▷    PSWD▷ ''RESULT''▷
.DATE  83/06/24  12:54:03  TYPE=C  RID=001  82/08/11  JDOE          <   14 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .                .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.===============.
.
.GRAND-TOT    -
. PRODUC  COST  = 255600
.  WHOLE   SALE$  = 319500
.  RETAIL    $$$$   = 447300
.  SALES  COMMISS = 44730
. SPACE  REQ  = 3420
.   DEMO   QUANTITY = 532
                    ..... END REPORT .....
```

8.12.3. V Option

The V option displays averages, subtotals, and grand totals horizontally under their respective report headings.

The V option is effective with vertical summation, averaging, and subtotaling functions. In addition, you can combine the V option with the E, O, T, R, U, or D options. Note that when you combine the V and T options, vertical summation, averaging, and subtotaling display lines are displayed as tab lines.

The following example add the V option to the function mask from 8.3:

```
v
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.==============.
 ********* ***** ****** ******* ******** ******* ***** ******** ***************
                 +      +       +        +       +     +☑
```

This result displays the grand totals on one line:

```
LINE▷ 10    FMT▷   RL▷ -     SHFT▷      HLD CHR▷    HLD LN▷ 6  PSWD▷ ''RESULT''▷
.DATE  83/06/24  12:55:44  TYPE=C  RID=001  82/08/11  JDOE          <   26 LINES>
. <<<  CORPORATE FACTORS BASE  >>>
* PRODUCT . SUB .PRODUC. WHOLE . RETAIL . SALES .SPACE.  DEMO  .              .
*  TYPE   . KEY . COST . SALE$ .  $$$$  .COMMISS. REQ .QUANTITY. DEMO RESULTS  .
*=========.=====.======.=======.========.=======.=====.========.==============.
 BLACKBOX1      A  13500   16875    23625 2362.50   100         1
 BLACKBOX5      B  13900   17375    24325 2432.50   140        50
 BLACKBOX6      C  14000   17500    24500 2450.00   150       100
 BLACKBOX7      C  14100   17625    24675 2467.50   160        10
 BLACKBOX8      D  14200   17750    24850 2485.00   170        20
 BLACKBOX9      D  14300   17875    25025 2502.50   180        40
 GREENBOX1      E  13700   17125    23975 2397.50   200        80
 GREENBOX2      E  13900   17375    24325 2432.50   210       160
 GREENBOX3      E  14100   17625    24675 2467.50   220         5
 GREENBOX4      F  14300   17875    25025 2502.50   230        15
 GREENBOX5      G  14500   18125    25375 2537.50   240        25
 GREENBOX6      H  14700   18375    25725 2572.50   250         1
 GREENBOX7      I  14900   18625    26075 2607.50   260         2
 GREENBOX8      J  15100   18875    26425 2642.50   270         3
 GREENBOX9      K  15300   19125    26775 2677.50   280         4
*
*GRAND-TOT        255600  319500   447300   44730  3420       532
                  ..... END REPORT .....
```

The caption of the display line appears in the first field that does not contain parameter specifications. In addition, the caption fills but does not exceed the number of character positions in the field where it appears. For example, the caption GRAND-TOT from the previous result (8.12.3) is displayed in the PRODUCT TYPE field because that is the first field with no parameters. GRAND– would appear in the PRODUC COST field if that is the first field with no parameters; GRAND-TOTAL would appear in the DEMO RESULTS field if that is the first field with no parameters.

If you specify parameters in all fields, no caption is displayed.

Only the following captions are displayed in a result (assuming there are available columns):

Display Line	Caption
Vertical summation	GRAND-TOTAL
Averaging	AVERAGE
Subtotaling	SUB-TOTAL
Number of entries	ENTRIES

When you specify the V option, the order of lines displayed at the end of the report is:

1. Separator (blank) lines
2. Vertical summation, averaging, and subtotaling display lines

When you specify the V and E options together, the order of lines displayed at the end of the report is the same, except they are followed by the number of entry display lines.

8.13. DISPLAYING CALCULATION RESULTS

The following principles describe how the results from the TOTALIZE function are displayed:

- Significant figures

  The maximum number of significant figures displayed is 15. The maximum number of columns for a calculation result, including the sign (for a negative value only) and decimal point, is 17.

- Right and left justification of displays

  The following displays are left-justified (no specification of option V):

  - Vertical summation totals and subtotaling result lines
  - Entry counting display lines
  - Averaging display lines

  The following fields are right-justified:

  - The results of horizontal arithmetic calculations
  - The results of cumulation operations
  - The numbers from sequencing operations

- Small receiving fields for results

  Actual results are displayed in all cases except when:

  – The result is larger than the size of the field containing it.

    An asterisk is placed in the first column of the result field and the remaining columns are filled with the result, beginning with the most significant digit. The * indicates that the entire result cannot be displayed.

    Example:

    If the result of the operation is 12345678 (eight digits) and the result field is only five columns long, the result is displayed as *1234.

  – The whole number portion of the result is equal to the size of the field containing it.

    In this case, the decimal portion of the result is omitted from the display, but the whole numbers are displayed.

    Example:

    If the result of the operation is 1234.5678 (eight significant digits, including four whole numbers) and the result field is four columns long, the result is displayed as 1234.

  – The whole number portion of the result is smaller than the size of the field containing it.

    In this case as much of the result as will fit in the field is displayed.

    Example:

    The result of the operation is 1234.5678.

Number of Columns	Displayed result
5	1234.
6	1234.5
7	1234.56
8	1234.567

  – The whole number portion of the result is larger than the size of the field containing it.

    In this case the result, 1234.5678, is displayed as *12.

- Division by 0

  When you divide by 0, the result field (=) is filled with asterisks.

  Example:

  If you divide by 0, the result field contains ******.

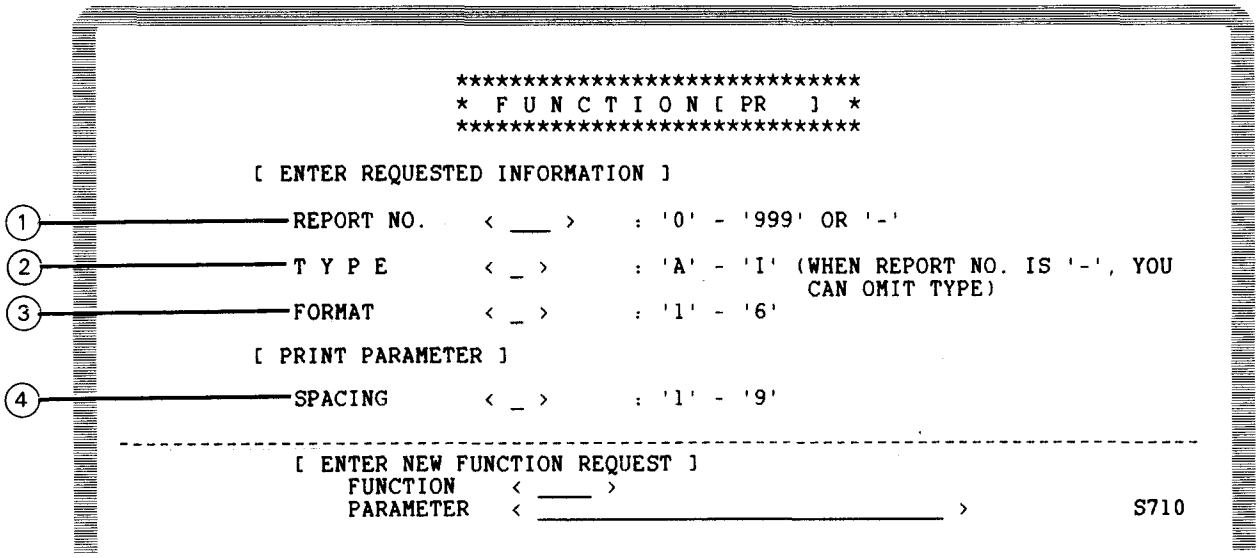
9. Printing Functions

9.1. PRINT FUNCTION (PR)

Use the PRINT function to print reports or results on the system printer.

To call the PRINT function, key in PR and press the XMIT key. Figure 9–1 shows the PRINT function request screen.

This function places the designated report or result on queue at the system printer. Then, the user logo is displayed.



NOTES:

(1) Specify the RID number of the report you want to print. To specify a displayed report or result, key in a minus (–) sign.

(2) Specify the report or result alphabetic form type.

(3) Specify the format that you want to use for printing the report. When you leave this field blank, format 0 is printed.

(4) Specify the number of spaces between each line. You can specify 1 to 9 spaces, where 1 is single spacing, 2 is double spacing, and so on. When you leave this field blank, the report is single spaced.

Figure 9–1. PRINT Function Request Screen

9.1.1. .EJECT Instruction

This instruction designates page breaks by keying in the character string .EJECT or EJECT in the first column of data in a report or result. This instruction advances the printer forms to the top of the next page, and printing resumes.

9.2. AUXILIARY FUNCTION (AUX)

The AUXILIARY function prints reports or results on the auxiliary printer specified in the AUX device parameter of the AUX function request screen.

To call this function and display the AUXILIARY function request screen, key in AUX and press the XMIT key. Figure 9–2 shows the AUXILIARY function request screen.

When you use the AUXILIARY function, the report or result is placed in the queue at the printer and the user logo is displayed on the screen. You can queue up to 28 files to an auxiliary printer. If this number is exceeded, error 867 is displayed at the initiating workstation.

NOTE:

You can use the EJECT or .EJECT instruction with the AUXILIARY function. Follow the same procedure used with the PRINT function (9.1.1).

```
                    ******************************
                    *  F U N C T I O N [ AUX  ]  *
                    ******************************

          [ ENTER REQUESTED INFORMATION ]

(1)       REPORT NO.      ( ___ )    : '0' - '999' OR '-'
(2)       T Y P E         < _ >      : 'A' - 'I' (WHEN REPORT NO. IS '-', YOU
                                          CAN OMIT TYPE)
(3)       FORMAT          < _ >      : '1' - '6'
          [ PRINT PARAMETER ]
(4)       AUX DEVICE      < ___ >    : 'PXX'
(5)       LINE NO. DELT   < _ >      : 'Y' - PRINT WITHOUT LINE NO.
(6)       HEADER DELT     < _ >      : 'Y' - HEADER IS DELETED
(7)       1ST CHAR DELT   < _ >      : 'Y' - 1ST CHARACTER IS DELETED
(8)       SPACING         < _ >      : '1' - '9'
(9)       START CHAR NO.  < ___ >    : '1' - '132'
-------------------------------------------------------------------------------
             [ ENTER NEW FUNCTION REQUEST ]
                FUNCTION     < ____ >
                PARAMETER    < ____________________________ >          S720
```

Figure 9–2. AUXILIARY Function Request Screen (Part 1 of 2)

NOTES:

(1) Specify the RID number of the report you want to print. Key in a minus sign (–) to specify a displayed report or result.

(2) Specify the alphabetic form type of the report or result.

(3) Specify the format that you want to use for printing the report. When you leave this field blank, format 0 is printed.

(4) Specify the name of the printer you want to use (pxx). Because you must specify a printer that is connected with the same MAPPER 80 job, consult with your MAPPER 80 coordinator for this information. When you leave this field blank, the report is printed on the printer connected to the requesting workstation.

(5) Specify a Y in this line if you do not want each line numbered. When you leave this field blank, each line is assigned a 5-digit line number on the printout.

(6) Specify a Y if you do not want headers printed. When you leave this field blank, headers are printed.

(7) Specify a Y if you do not want the first symbol in each line printed (usually a symbol to indicate the line type).

(8) Specify the number of spaces between each line. You can specify 1 to 9 spaces, where 1 is single spacing, 2 is double spacing, etc. When you leave this field blank, single spacing is assumed.

(9) Specify the first character position of the report where you want printing to start. When you leave this field blank, printing begins from the first column of each line.

Figure 9–2. AUXILIARY Function Request Screen (Part 2 of 2)

9.3. AUXILIARY SUSPEND FUNCTION (SX)

The AUXILIARY SUSPEND function discontinues printing on an auxiliary printer. You can use this command from any workstation, providing that both the workstation and the auxiliary printer are connected to the same MAPPER 80 job.

To call the AUXILIARY suspend function, key in:

```
SX Pxx
```

where:

Pxx
: Is the auxiliary printer.

NOTE:

If you omit Pxx, the auxiliary printer that is physically attached to the requesting workstation is assumed.

The printing of other reports or results on the print queue continues when the AUXILIARY SUSPEND function finishes processing.

9.4. COP FUNCTION (COP)

The COP function prints MAPPER 80 reports or results on the auxiliary printer (COP) connected to a workstation.

The COP function differs from the AUXILIARY function (9.2) in three ways:

1. Only the printer connected to the workstation requesting the COP function receives the printout.

2. Because the data output to the COP is displayed on the screen of the workstation requesting the COP function, you cannot use another MAPPER 80 function until printing finishes.

3. Press the F2 function key to cancel the printing operation.

To call this function, key in COP and press the XMIT key. Figure 9–3 shows the COP function request screen.

NOTE:

You can use the EJECT or .EJECT instruction with the COP function. Follow the same procedure used with the PRINT function (9.1.1).

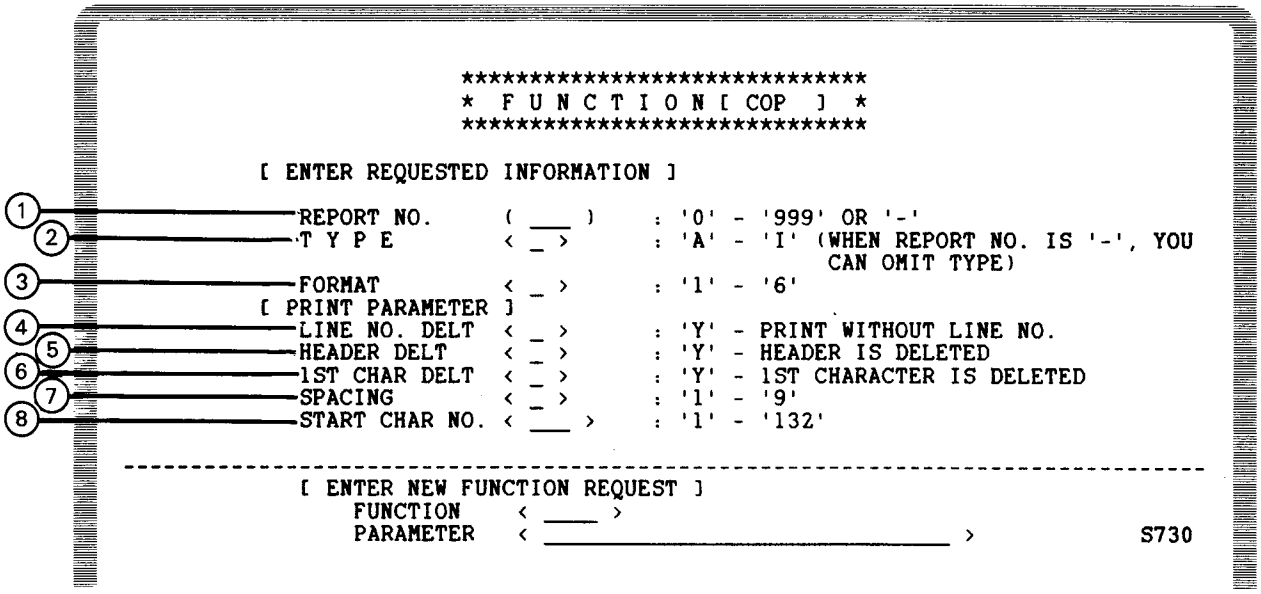


Figure 9–3. COP Function Request Screen (Part 1 of 2)

NOTES:

(1) Specify the RID number of the report you want to print. Key in a minus sign (–) to specify a displayed report or result.

(2) Specify the alphabetic form type of the report or result.

(3) Specify the format that you want to use for printing the report. When you leave this field blank, format 0 is printed.

(4) Specify a Y in this line if you do not want each line numbered. When you leave this field blank, each line is assigned a 5-digit column number on the printout.

(5) Specify a Y if you do not want headers printed. When you leave this field blank, headers are printed.

(6) Specify a Y if you do not want the first symbol in each line printed (usually a symbol to indicate the line type).

(7) Specify the number of spaces between each line. You can specify 1 to 9 spaces where 1 is single spacing, 2 is double spacing, and so on. When you leave this field blank, the report is single spaced.

(8) Specify the first character position of the report where you want printing to start. When you leave this field blank, printing begins from the first column of each line.

Figure 9–3. COP Function Request Screen (Part 2 of 2)

Appendix A. Summary of MAPPER 80 Manual Functions

Table A–1 lists and describes each manual function. Also, paragraph numbers are included for quick reference.

Table A–1. MAPPER 80 Functions Summary (Part 1 of 2)

Function	Call	Description	Paragraph
ADD LINE	]+n	Adds line to a report or result	6.2.2
	]n+p	Adds predefined lines	6.2.2.2
ADD REPORT	AR	Creates a new report within a given report type	6.3.1
ADON *	ADON	Adds a report to another report or result	6.3.4
AUXILIARY	AUX	Prints out on auxiliary (COP) printer	9.2
AUXILIARY SUSPEND	SX	Discontinues printing operation on auxiliary printer	9.3
BINARY FIND	BF	Finds specified data using the binary division method	7.4
CHANGE *	CHG	Locates a character string and changes it to another character string	7.7
Column count	CC	Displays column numbers in a report or result as an aid in run design **	
COP	COP	Prints out on COP printer	9.4
DELETE RESULTS	DEL	Deletes lines after a search/match update	6.3.6
DELETE LINE	]n–	Deletes lines from a report or result	6.2.4
DELETE REPORT	DR	Deletes a report from within a report type	6.3.5
DISPLAY	D	Displays a specified report or result	4.3
DUPLICATE LINE	]nx	Duplicates a line within a report or result	6.2.3
	]nxg	Duplicates a group of lines	6.2.3
DUPLICATE REPORT	XR	Duplicates a report or result	6.3.2

Table A–1. MAPPER 80 Functions Summary (Part 2 of 2)

Function	Call	Description	Paragraph
Fast access		Specifies functions without using the function request screen	3.7.3
Field number	FLD	Displays field numbers on a report or result as an aid in run design **	
FIND	F	Displays a report in stages on the screen	7.2
INDEX *	I	Displays report type index	7.1
Line control	L	Redisplays lines 0 and 1 on the screen	2.3.4
	LL	Redisplays the last line of the report after an error display	2.3.5
MATCH *	MA	Matches (checks) two reports and extracts data	7.8
MATCH UPDATE *	MAU	Extracts matched data from a report	7.9
MODE	M	Specifies the mode to use	4.1
PREVIOUS RESULT DISPLAY	PRED	Displays the previous result on the screen	4.5
PRINT	PR	Prints out a report or result on the system printer	9.1
RELEASE	∧	Terminates the function or display on the screen	4.4
REPLACE	REP	Replaces a report with another report or result	6.3.3
RESUME	RSM	Restarts an operation after a halt	7.3
ROLL BACK	RB	Cancels a line update and returns a report to its original condition	6.2.5
RUN	RUN	Activates the run**	
SEARCH *	S	Searches a report or result	7.5
SEARCH UPDATE *	SU	Searches and extracts data from a report	7.6
SIGN OFF	X	User signal to end a MAPPER 80 session	3.4
SIGN ON		User signal to start a MAPPER 80 session	3.3
SOE UPDATE	▷	Updates data within a report	6.2.1
SORT *	SORT	Sorts a report or result	7.10
TOTALIZE*	TOT	Performs arithmetic calculations within a report or result	8.1
TYPE	T	Displays all form types within a mode	4.2
UPDATE RESULTS	UPD	Updates a report with search/match update data	6.3.7

* Functions that produce a result

** See MAPPER 80 run functions user guide, UP-9734 (current version) for details on these functions.

Table A–2 lists the names and parameters of the fast access method for each manual function.

Table A–2. MAPPER 80 Functions – Fast Access Method

Function	Fast Access Format	
	Name	Parameters
ADD ON	ADON	r1t1,r2t2
ADD REPORT	AR	rt
BINARY FIND	BF	rt,f
CHANGE	CHG	rt
DISPLAY	D	rt,f
DELETE RESULTS	DEL	pw
FIND	F	rt,f
REPLACE	REP	r1t1,r2t2
SEARCH	S	rt,f
SEARCH UPDATE	SU	rt,f
SORT	SORT	rt,f
AUXILIARY SUSPEND	SX	pxx
TOTALIZE	TOT	rt,f
UPDATE RESULTS	UPD	pw
DUPLICATE REPORT	XR	rt

LEGEND:

r,r1,r2	Indicate the RID number 0 to 999 or – (minus). Can be omitted.
t,t1,t2	Indicate the form type A to I. Can be omitted on – (minus) for RID number.
f	Modified format number 1 to 6. Can be omitted.
pw	Report password of one to six alphanumeric characters. Can be omitted.
pxx	Printer name. pxx format. Can be omitted.

Table A–3 describes the manual function options and indicates the manual functions to which they apply.

Table A–3. Option Summary Table

Options	Purpose	BINARY FIND	FIND	CHANGE	MATCH/MATCH UPDATE	SEARCH	SEARCH UPDATE	TOTALIZE
A	Processes all line types		●	●		●	●	
D	Deletes search or match lines from the result				●	●	●	
Dn	Rounds down answer to nearest n							●
E	Counts number of entries							●
F	Processes the first column of the mask parameter as part of the character string			●				
F	Leaves original data in the receiving field of the unmatched lines				●			
H	Displays the header line of the initial report only of the multiple reports searched					●		
I	Deletes the index and item name of the total, subtotal, and average							●
M	Substitutes line type when a substitution occurs in the line			●				
M	Displays the matched lines only				●			
N	Displays data other than the specified parameter					●	●	
N	Displays the unmatched lines only				●			
O	Displays total, average, and subtotal lines only							●
P	Indicates that the key field has been sorted				●			
Q	Stops search after the first find	●						
Rn	Rounds answer to nearest n							●
Rm-n	Searches multiple reports		●			●		
Sn	Specifies starting line number for scanning			●				
T	Displays total, average, and subtotal lines as tab lines when used in combination with the V option							●
Tx	Sets transparent character to x			●				
Un	Rounds up answer to nearest n							●
V	Displays total, average, and subtotal under each item header							●
@	Blank fields	●	●			●	●	
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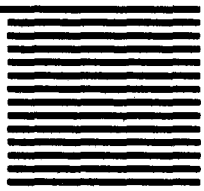

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