KAYPRO

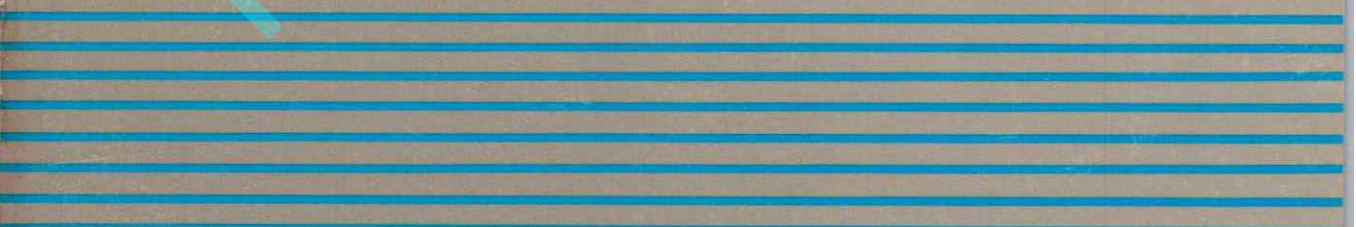# REPORTSTAR™
GENERAL INFORMATION
MANUAL

ReportStar™

General Information Manual

For ReportStar Release 1.0

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TRADEMARKS

DISCLAIMER

This document was initially typed, corrected, and edited using WordStar word processing.

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Introduction

MicroPro International Corporation designs, develops, manufactures, and markets microprocessor based software. The company is committed to excellence, not only in products but in service to our customers. The people at MicroPro are constantly looking for ways to meet the ever changing needs of our customers and improve those products which have already established the company as the leader in the industry.

ReportStar is one of the latest products developed and released by MicroPro. The wide range of tasks you can perform using ReportStar goes well beyond the capabilities of a simple report generator program. As a ReportStar user you have an open door to the information you have entrusted to your microcomputer. Until ReportStar, only complex (and expensive) programming could make that information available to you in a useful format.

MicroPro places the full support of the company behind every product it manufactures. In the event that you should encounter a problem with ReportStar which you cannot solve, your dealer will provide whatever advice and assistance you require.
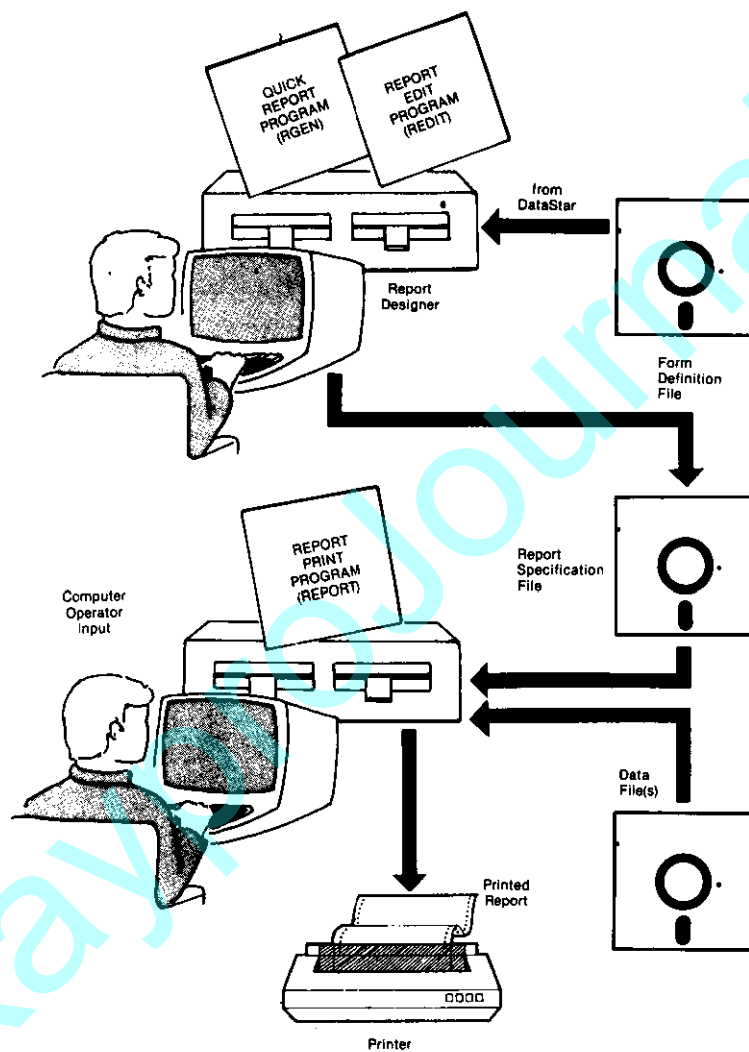
Illustration 1
ReportStar System Map

Glossary of Terms and Concepts

This glossary defines the terms and concepts you must understand before you start the ReportStar program. We suggest you read it through completely now and then refer to it later as needed. Illustration 1 shows the relationship among some of the elements discussed.

BOOT

The term **BOOT** is derived from "Bootstrap." Before setting out on any journey or adventure, one should pull on one's boots and hook up the straps. It is the same with computers. Before you begin, you need to bring in (or BOOT) the operating system.

Doing a boot procedure brings the operating system into your computer's memory. Once the operating system has been booted in, you can do a variety of tasks using ReportStar, DataStar, WordStar, and other programs.

BUFFER

BUFFER is a name assigned to a portion of your computer's memory. A buffer area is usually set aside for data which is being read from or written to a datafile or printer. It may be thought of as a way station for transient information, since data moves in and out with regularity. Buffers make it easy to move data around, perform calculations, and make comparisons.

CONTROL BREAK

Refer to SORT ORDER in this glossary.

CRT

CRT is an acronym for Cathrode Ray Tube (or Terminal). Sometimes you may hear your computer terminal (screen and keyboard) referred to as a CRT.
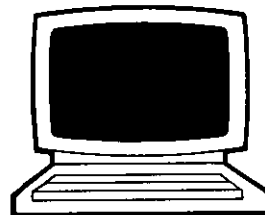
CURSOR   The little light that shows up regularly on your display screen is called the CURSOR. It's like the moving ball on a typewriter in that it moves when you type, leaving the letter behind it.

The following symbol represents the cursor throughout your ReportStar documentation.

█

DATAFILE   A **DATAFILE** is a group of related pieces of information (called records) stored together on a disk. You store records in your computer files just as you would store them in a filing cabinet. When you write invoice information into an invoice file on a computer disk, for example, you store records for retrieval later. Any disk may contain one or more datafiles. Refer to Illustration 2.

DATA RECORD   A **DATA RECORD** contains a variety of information from a single file entry, such as an invoice. Although a data record may consist of only one data field, it normally contains more. For example, it might contain such fields as invoice date, customer number, customer name and address, shipping method, terms, etc. This collection of information becomes a data record. Or, to say it another way, it becomes a record of the invoice.

DATA FIELD   A **DATA FIELD** is a single item of information. In the invoice example, the invoice form has many spaces on it for information about all aspects of a transaction. It may contain the date, customer number, customer name and address, shipping method, terms, description of items sold, and other information. In computer jargon, these pieces of information are known as data fields. One or more data fields constitutes a data record.

DATA VALUE   The characters in a data field represent its **DATA VALUE**. The value of a data field will vary depending on what it represents. For example, if you have a data field assigned to contain people's names, one of which is John Smith, the characters "JOHN SMITH" would be the data field value. If you have a second data field for balance due, and John Smith owes $65.00, this amount would be the data field value.
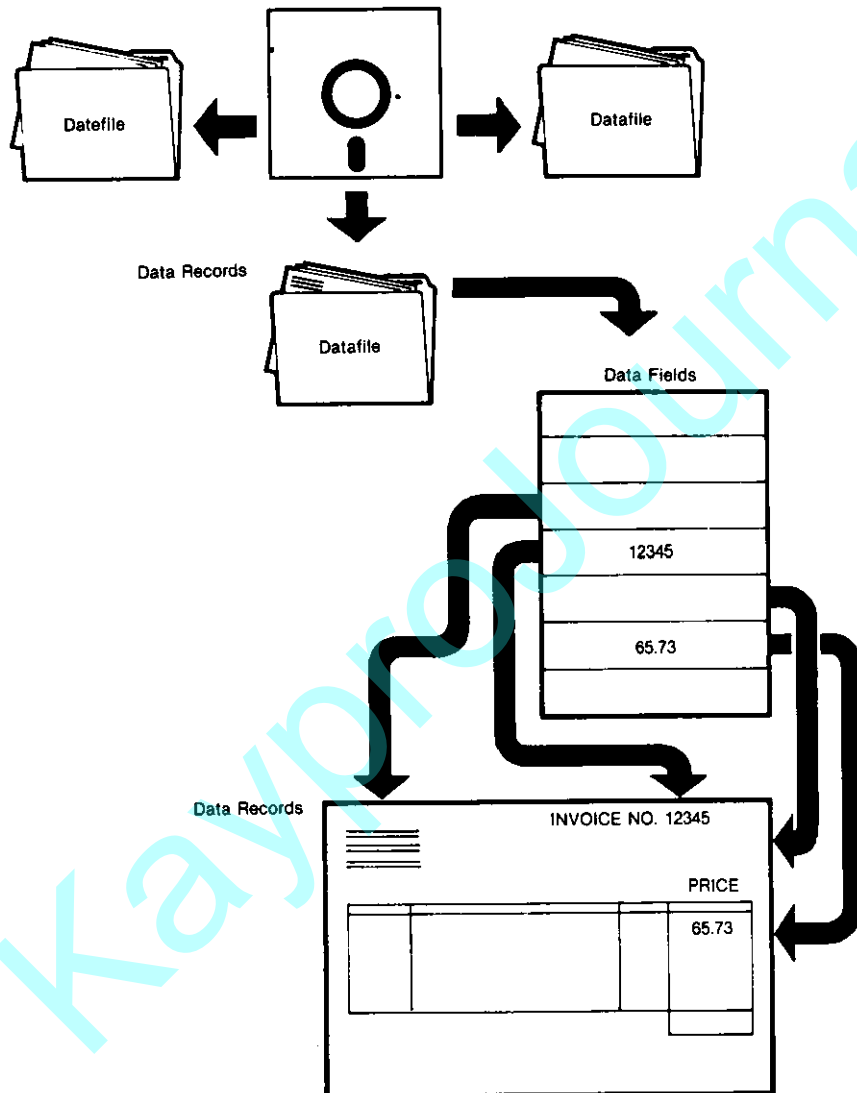
**Illustration 2
Data Records, Fields, and Files**

DEFAULT

The **DEFAULT** represents the action ReportStar will take unless directed otherwise. For example, ReportStar might offer you three options: to print a report, save it on disk, or abandon it. The first one would be the default. Unless you chose the second or third option, the first would stand (by default) and your file would print. As you will see, this feature can speed up your work.

DISK

A **DISK** (or "diskette") is a circular piece of mylar (plastic) encased in a protective envelope. Two common sizes are 8-inch and 5 1/4-inch. Information is recorded on the disk surface by magnetic encoding. A computer can read and interpret this information and make it available to you. Extreme care should be taken in handling a disk. Please read the manufacturer's instructions regarding disk handling.

The disks described in the preceding paragraph are known as "floppy" disks because of their flexibility. There are also "hard" disks in use which are usually enclosed permanently inside a metal case and resemble heavy phonograph records. Your system may use either or both of these types of disks.

The symbol shown to the left represents both floppy and hard disks throughout the documentation package.

DISK DRIVE

A **DISK DRIVE** is the part of your computer which houses the disk you're using. When you put a disk in the drive, the computer can read or write information on the disk. As each disk drive has its own letter, often A or 8, you can tell the computer which drive (and consequently, which disk) you want to use. ReportStar recognizes disk drives named from A to P. Do not tell it to use a disk drive that is not a part of your system.

DISPLAY SCREEN

ReportStar communicates with you by presenting information on the **DISPLAY SCREEN** of your terminal.

DISPLAY SCREEN REFERENCE NUMBER

This number, usually four digits, is in the corner of each help message. You can find this number by typing ^J in REDIT or REPORT. You will find the same number on the page in your User Reference Manual which describes that display screen and procedures associated with it, and all the references are explained more fully in the Introduction to your User Reference Manual. **DISPLAY SCREEN REFERENCE NUMBERS** are sometimes called "Procedure Numbers" (see "Procedure Number" in this glossary).
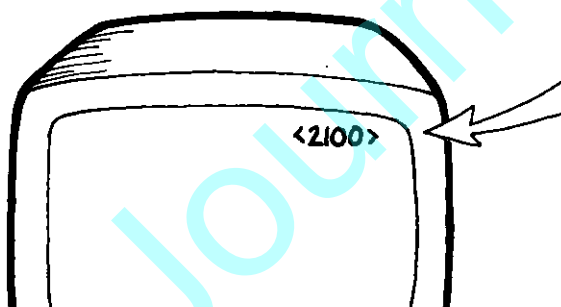
HELP SCREEN

A **HELP SCREEN** provides information that will help you respond to ReportStar's questions (see "prompt" below). You can ask for a Help Screen to be displayed on your terminal at any time.

PASS

The term **PASS** describes the steps a program takes when processing information. When ReportStar is preparing your printed report, it first reads the instructions you have provided. Next it reads a data record from the datafile and processes the information in that record according to the instructions. Each time a record is read and processed, one complete pass has taken place.

PROCEDURE

A **PROCEDURE** is an action you take to tell ReportStar what you want done. It may be as simple as responding yes or no to a question or as complex as providing a mathematical formula for the calculation of a data field value.

PROCEDURE NUMBER	**PROCEDURE NUMBERS** are identical to Display Screen Reference Numbers (see page 7).
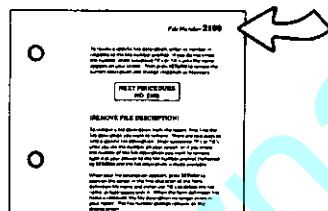
PROMPT	A **PROMPT** is a question or request for information displayed on your screen. Working with ReportStar is like having a conversation with an electronic brain. The computer asks you questions in an effort to find out what it must know to do what you want it to do.
REPORT FIELD	A **REPORT FIELD** is a specific area you set aside for data values in your report layout.
REPORT GENERATOR	A **REPORT GENERATOR** is a program that takes the densely packed information from your datafiles and prints that information in a useful format. With ReportStar you can perform other functions as well. For example, you can derive report fields by calculation, or you can create datafiles as output from a report.
SORT ORDER AND KEY FIELDS	**SORT ORDER** refers to the sequence of **KEY** fields in a datafile. Imagine for a moment there is a stack of invoices on your desk. Looking through the stack, you find the invoices are in order by invoice number. If you had these invoice records in a datafile on a disk in the same order, the sort order of that file would be by invoice number.
	One or more fields in the record is selected as the item (or items) that will determine the sort order. This item is the KEY. In the above example, the key to the disk file of invoice records is the invoice number.

Customer No.	Date of Sale
00563	01/16/82
00567	02/10/81
00567	05/20/81
00567	06/03/81
00567	11/15/81
00567	01/04/82
00568	01/02/81
00568	04/19/81

You can change the SORT ORDER of a datafile any time you want. You simply re-sort the datafile using a different item as the key. For instance, you can arrange the invoices at left by customer name, transaction date, or whatever you choose. ReportStar includes a program named FormSort for this purpose.

When you put the information in a specific sequence, your printed reports will be much more organized. In the case of large volumes of records, sort order can be invaluable. Note that the sort order of the records in the example is by Date of Sale within Customer No.

CONTROL BREAKS

CONTROL BREAKS are directly related to the sort order and Key of a datafile. When there's a change in the data of the Key from one record to the next in a datafile, a control break allows you to determine what happens next.

For example, if you want to group sales transactions by month and print a subtotal for each, you would ask for a control break on the item "month." When the month of one record is different from the month of the next record, the control break occurs. At that point, the total of the transactions for the month will print. If the file is not sorted by "month," a control break may occur every time a new record is processed.

ReportStar
General
Information
Manual

ReportStar
Beginning
Training
Guide

ReportStar
User
Reference
Manual

ReportStar
Technical
Reference
Manual

ReportStar
Command
Summary
Card

ReportStar Distribution
Diskette
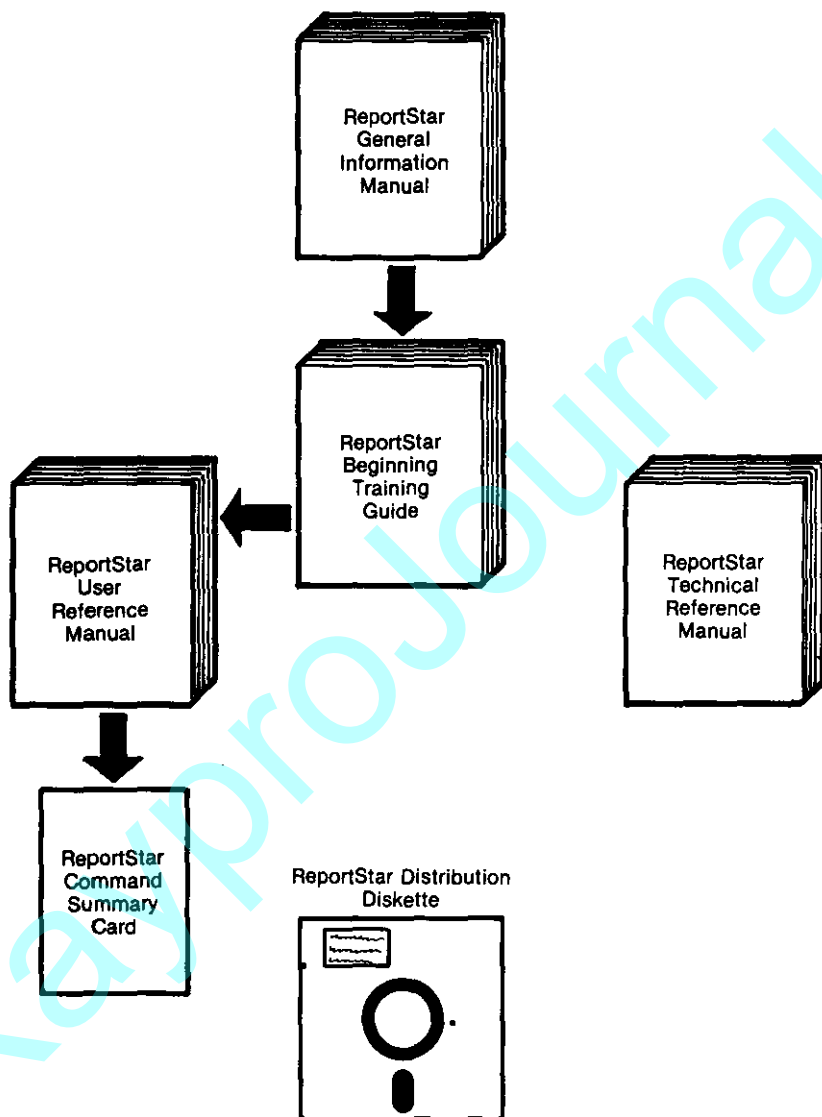
Illustration 3
Your ReportStar Documentation Package

Your ReportStar Documentation Package

Your ReportStar documentation package contains detailed information about the system. We have organized the package so that the information you need is readily accessible. If you'll take a few minutes to study this section and understand how your documentation materials are organized, you'll be able to find what you need when you need it.

There are six parts to your ReportStar documentation package, each part serving a unique purpose. You'll progress from one to another as your skills improve and as your needs change.

ReportStar General Information Manual

This is the manual you are now reading. It has been designed to give you a basic understanding of ReportStar and to suggest some ways in which you might apply the program to your own situations. After you familiarize yourself with this manual, you'll move on to the next part of the documentation package –the Training Guide.

ReportStar Training Guide

The Training Guide leads you through many of the basic tasks you can perform with ReportStar. By the time you have completed these exercises, you'll be able to use the program in everyday situations. Once you've mastered the Training Guide, you'll be ready to move on to the User Reference Manual.

ReportStar User Reference Manual

The User Reference Manual will provide you with the information you need to make ReportStar work for you. This manual describes and explains the entire ReportStar system, including its many display screens and associated procedures. Indexes make the information readily accessible.

ReportStar Command Summary Card

After you have been using ReportStar for a while, you'll find yourself turning to the User Reference Manual less often. Instead, you'll be using your Command Summary Card, which is a compact list of ReportStar commands. When you're creating reports with ReportStar, you'll find the card extremely helpful.

ReportStar Distribution Disk

The final part of your package is the Distribution Disk. This disk contains all of the programs and files you will need to run ReportStar. You will learn more about the content of this disk in the section of this manual called "ReportStar and Your Data Base."

The Main Features of ReportStar

ReportStar provides an efficient way to access and use the information you have entrusted to your computer. When you use ReportStar you are simply moving information from one part of your computer (the disks) to another part (the printer). But if you only move the information to the printer without formatting it, your printed reports will be too difficult to read to be of any practical use. ReportStar also makes it easy to print reports in a format you design.

ReportStar has several other useful features that make it more than a report generator. You can produce anything from a simple list of information in a file to a complex, sophisticated report.

Seven important ReportStar features are briefly described here and on the following pages.

Quick Report

When you need information immediately, *now*, the Quick Report program will help you get it. You can produce a simple report in a few minutes. The Quick Report program does most of the work for you and helps make some basic decisions. It will even create a report format and then give you the opportunity to make changes in that format before you print the actual report. Thus, the Quick Report may be used as a building block for creating more complex reports.

Report Format Editing

With ReportStar, you are the report designer. At your terminal, you specify what data will be used in preparing the report, when and how you want it to be used, and where you want it printed on your report. You can change headings, move fields around, insert dollar signs and decimal points, and do more, simply by responding to ReportStar's prompts. Once the report looks exactly right, it is ready to print. See the illustration on page 14.
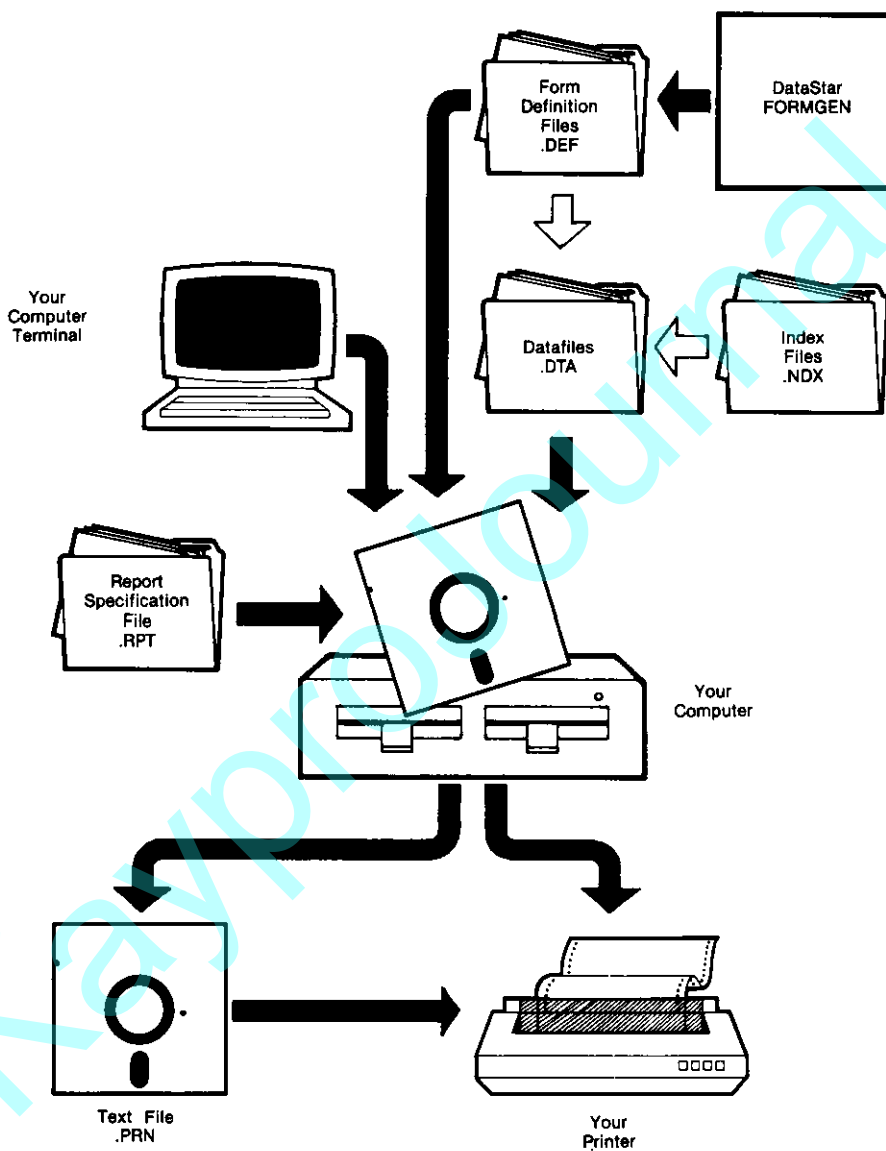
Illustration 4
Designing A Report

Print Enhancement Package

The Print Enhancement Package makes it possible to dress up your reports. For example, you can print selected data fields in bold face, underline certain columns, control line height and character width, strike over certain text, and bracket negative figures. More graphically, you can:

BOLDFACE
<u>Underline</u>
Control Character Width
~~Strikeover~~, etc.

Field Totaling

By responding to ReportStar's prompts, you indicate the data fields for which you want totals or subtotals computed. You can also specify when those totals are to be printed and when they are to be stored in separate datafiles.

Transaction Processing

With ReportStar, you can use several datafiles for input to a report. This combining capability means that you can cross-reference several files and produce very comprehensive reports. The input files can also be output as a single file of relevant data or split to produce files for other specific needs.

FormSort

FormSort is the ReportStar program for sorting datafiles and performing file maintenance. All your file sorting needs can be accomplished with this simple yet powerful program.

Writing Reports to Disk

This feature makes it possible to write your ReportStar report on a disk instead of printing it. This option offers a number of advantages. First, a report can be written on a disk much faster than it can be printed. And although you will probably print the report eventually, you can do so at your convenience. Second, a report written on a disk serves as an excellent backup copy. Finally, this feature lets you look at reports *before* printing them. Previewing is especially useful for long reports. All reports written to disk are named with the report name plus the ".PRN" extension. They can then be edited with WordStar.

Other ReportStar features are discussed throughout your documentation.

ReportStar and Your Data Base

What is a Data Base?

DATA BASE is the collective term for all of your computer files. If you are a business owner, for example, you may refer to your Personnel, Inventory, and Customer files as a single entity, your data base.

You can also use the term data base when you mean a collection of files which are related in some way. For example, suppose you have a Personnel file and a Payroll file on your computer. Since the information in these files is related, you could refer to the two together as your company's Personnel (or Payroll) data base.

The ReportStar Data Base

The disk you have received with your ReportStar documentation package contains several files. Each of these files has a different, but related purpose. When we refer to the ReportStar Data Base, we mean the datafiles and reports on your distribution disk.

Let's look at your ReportStar Data Base as it has been prepared for you by MicroPro.
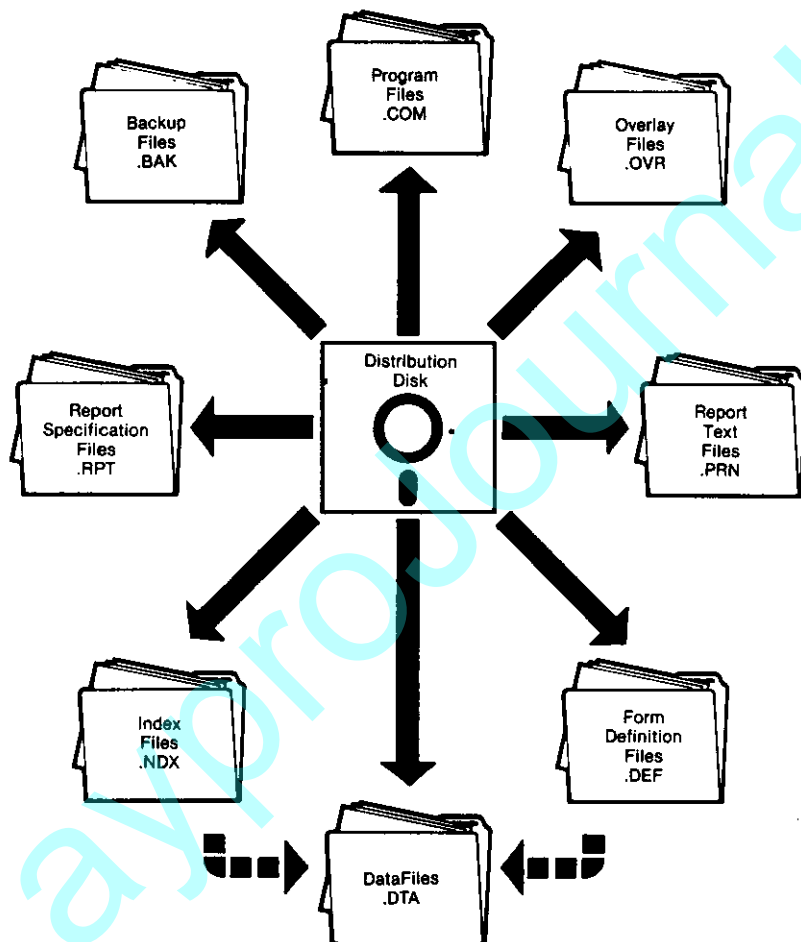
Illustration 5
Files Contained On Your ReportStar Disk

Files Contained on Your ReportStar Disk

There are several types of files contained on your ReportStar distribution disk, as shown in Illustration 3. Below is a directory of these files. If your distribution disk does not contain these files, please report the matter to your MicroPro dealer.

CLIENTSR.DTA	CLIENTSR.DEF	CLIENTSR.NDX	INVCE.DEF
INVCE.DTA	INVCE.NDX	PAYMENTS.DTA	PAYMENTS.DEF
PAYMENTS.NDX	PRODUCTR.DTA	PRODUCTR.DEF	PRODUCTR.NDX
REDIT.COM	REMSGS.OVR	REPORT.COM	RGEN.COM
RSMSGS.OVR	STAFF.DEF	STAFF.DTA	STAFF.NDX
FORMSORT.COM	FORMSORT.OVR		

Program (.COM) Files

The directory contains several files with the suffix ".COM". These files contain the programs which make it possible for you to run ReportStar on your computer.

Overlay (.OVR) Files

Files with an ".OVR" suffix are the same as program (.COM) files. As these files work behind the scenes during ReportStar operation, you don't have to worry about them. Just make sure they are on your disk when you use the ReportStar programs.

Backup (.BAK) Files

Backup files are your insurance policy. When you make changes to one of your files, ReportStar saves the original version as a backup. If for some reason you should lose a file from your disk, you can recover that file from the backup version. You will learn more about this process later. You will not find any backup files on your original distribution disk.

Report Specification (.RPT) Files

You will be creating report specification files as you use ReportStar to generate actual reports. The information in a report specification file tells ReportStar everything it must know to create the report(s) you request: where to find the data and how to format this data for printing. You will create a separate .RPT file for each report you design. The next time you want to run the same report, all you'll have to do is give ReportStar the name of the report specification file that defines your report, and ReportStar will do the rest.

Even after you have created a report specification file, you can use ReportStar to go back and make changes to that file.

Report Text (.PRN) Files

If the report is sent to a disk file rather than the printer, it is saved with the .PRN extension. It can then be edited using a text editor or WordStar.

```
                                              DATA FILE
                                points to    ┌──────────┬──────────┐
                                             │ Franklin │          │
                                             ├──────────┼──────────┤
                  INDEX FILE                 │ Smith    │          │
                ┌──────────────┐             ├──────────┼──────────┤
                │ Adams        │             │ Jones    │          │
                ├──────────────┤             ├──────────┼──────────┤
                │ Burns        │             │ Burns    │          │
                ├──────────────┤             ├──────────┼──────────┤
                │ Davis        │             │ Shoop    │          │
                ├──────────────┤             ├──────────┼──────────┤
                │ Franklin     │             │ Wilson   │          │
                ├──────────────┤             ├──────────┼──────────┤
                │   ~~~~~~~    │             │ Adams    │          │
                ├──────────────┤             ├──────────┼──────────┤
                │ Wilson       │             │ Tate     │          │
                └──────────────┘             ├──────────┼──────────┤
                                             │ Nixon    │          │
                                             ├──────────┼──────────┤
                                             │ Davis    │          │
                                             ├──────────┼──────────┤
                                             │ Hobart   │          │
                                             ├──────────┼──────────┤
                                             │  ~~~~~~  │          │
                                             └──────────┴──────────┘
```
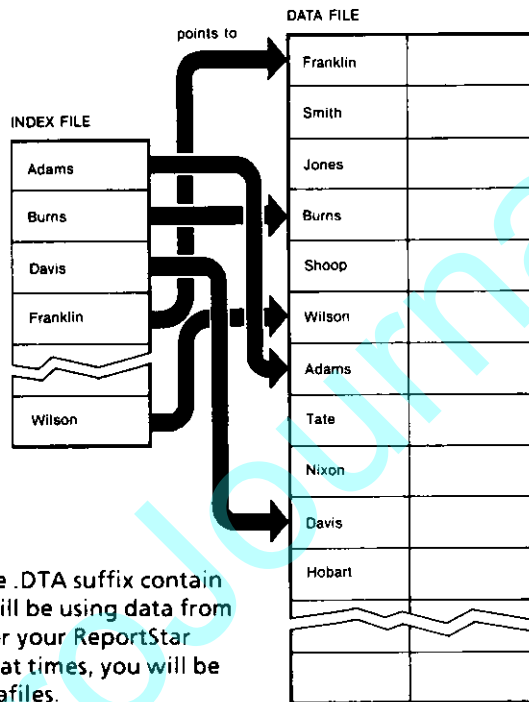
Datafiles (.DTA)

Files with the .DTA suffix contain
data. You will be using data from
these files for your ReportStar
reports and, at times, you will be
creating datafiles.

Perhaps you already have some
datafiles on your computer that you
will want to use with ReportStar. If
these files were created with
DataStar, they may be used just as
they are. Otherwise, the files may
have to be converted to the format
recognized by ReportStar. You'll
find technical information necessary
to convert your files in the
ReportStar Technical Reference
Manual, available from your
MicroPro dealer.

Index (.NDX) Files

An index file makes it possible to retrieve records *in a specified order* even if they have been entered in random order. The computer uses index files in much the same way you would use an index to find a specific book in the library. The computer looks in the index to find the exact location of the information it needs. It then retrieves that information and makes it available to you. Illustration 4 shows the relationship between datafiles and index files.

When you create datafiles with ReportStar, you have the option of writing a companion Index File. When you select this option, ReportStar creates the index file for you.

Form Definition (.DEF) Files

A definition file contains the instructions ReportStar needs to retrieve the data for your report. Data is stored in a file in a predetermined format. For example, in the CUSTOMER datafile the customer name may occupy the first twenty positions, the address the next fifteen positions, and so forth. This format would be the same for all data records stored in the file. ReportStar must know the specifications of this format in order to extract the data for your report. Your form defin-ition file also tells ReportStar the names you want assigned to the data fields in that file.

The form definition file is created using the FORMGEN program in DataStar. If you want more information about the content and structure of this file, please refer to your DataStar manuals.

Summary

Your ReportStar distribution disk contains a number of important files that you must keep intact. You will be using them to run ReportStar as well as to train other people to run it. We suggest you make a copy of your ReportStar distribution disk as soon as possible. Store your original in a place where it won't be exposed to extreme heat or cold, dust, magnetic fields (including electric motors), or direct sunlight. Use the copy you create for processing.

As you continue to use ReportStar, you will be adding report specification files to your ReportStar data base. Your own needs will dictate which of these files you will keep.

Think of your ReportStar data base as a library and each file as a separate book. Occasionally you will want to add new books to the library and remove others. Remember, it's *your* library. How well you maintain it will determine how well it serves you.
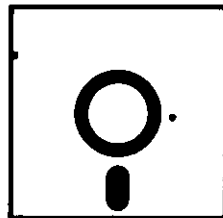
REPORT
SPECIFICATION
FILE
Filename extension = .RPT

Tells ReportStar

- which datafiles are to be used for input or output

- where and how to position data fields on the report

- which data fields to use from the input file(s) and which to write to output files

- which data field values are to be computed or calculated from other fields

- which report fields require the insertion of special characters such as dollar signs, decimal points, brackets, boldface, etc.

- how the report should be formatted (what it looks like).

FORM
DEFINITION
FILE
Filename extension = **.DEF**

Tells ReportStar

- the organization and format of the data contained in the associated datafile – length, special characters, decimal positions

- the names by which the data fields may be referenced

- the data fields which may be used as indexes for the datafile

- the file order of the datafile

- the fields available for reporting (intermediate fields are not used by ReportStar).

A form definition file cannot be created by ReportStar. To create this file, you must use the FormGen program which is part of DataStar.

Teaming Up The MicroPro Family of Products

In this section we are going to describe some other MicroPro products and show you how to use them with ReportStar.

DataStar and ReportStar

The only way to create a form definition file is through DataStar (using the FormGen program). Since ReportStar is dependent on the use of form definition files, you must have DataStar. If you do not currently own a copy talk to your dealer about this product.

Of course, DataStar can do much more than create form definition files. Just as ReportStar is the most convenient method available for *retrieving* information from your computer, so is DataStar the most convenient for *storing* information in your computer. Put these two products together and you move information around on your computer quickly and efficiently.

WordStar with ReportStar

If you are presently a WordStar user, you will notice similarities between the way WordStar processes text and the way ReportStar produces reports. The system is designed this way so that you can use WordStar to print a ReportStar report you have written to disk. You can also use WordStar to further enhance your report before you actually print it.

CalcStar with ReportStar

With CalcStar you can create and easily change financial spread sheets. ReportStar can then create customized reports using the information from these spread sheets. In this way, ReportStar will make CalcStar an even better performer.

All MicroPro software products are file compatible, i.e., any file created by one MicroPro product can be used by another. Once you begin to use the MicroPro products together, you will find out just how valuable and useful they make your computer.

If you want to learn more about any of these MicroPro products, your dealer will be happy to supply you with materials describing their individual features and applications.

Getting Started With ReportStar

Now that you are familiar with some of the ReportStar concepts and features, you're probably eager to start creating reports. While it may be tempting to jump right in and begin to use the programs, we recommend that you follow the step-by-step procedures discussed in this section before going any further.

STEP 1. Look Through Your ReportStar Manuals

You will save yourself a great deal of time if you familiarize yourself with all of the manuals in your ReportStar documentation package. We do not recommend that you read each of these manuals at this time, but rather browse through them to see what information is available and how it is organized.

STEP 2. Make a Copy of your ReportStar Distribution Disk

After studying your ReportStar manuals, make a duplicate copy of the distribution disk. Your computer's operating system probably has a utility program for making copies of disks. We strongly recommend that you use a copy and not the distribution disk to run ReportStar programs.

STEP 3. Study Installation Instructions

Before you can begin to use the programs, you must install them for your computer. ReportStar must be told the type of computer terminal and printer you use. When you run the installation program, you are asked to provide this information. Appendix B of your User Reference Manual contain complete instructions. Study this information and plan your installation before beginning the installation procedures.

STEP 4. Install ReportStar on Your Computer

Once you have planned your installation, run the Install program according to the instructions in Appendx B of your User Reference Manual. If you do not follow the installation instructions outlined, the Training Guide may be difficult to follow.

STEP 5. Do the Training Exercises

After ReportStar has been successfully installed on your computer, turn to the first exercise in your Training Guide and begin. When you finish the Guide, you can put ReportStar to work preparing your reports.