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DIALING  
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TRANSMITTING

ERROR MESSAGES

OTHER INFORMATION

UNRECORDED  
CALL RECORDS

UNRECORDED  
CALL RECORDS

UNRECORDED

# DATAPOINT

for communications

## SIMPLIFIED USER'S GUIDE

DATAPOINT CORPORATION



**A Simplified User's Guide  
to  
the DATAPOLL Communications Package**

The text in this manual was entered, edited, and typeset using the Datapoint 2200  
with a phototypesetter and the Scribe Text Processing Program.

**Manual No. 50204**

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DATAPOLL is an easy-to-use communications package that requires no programming. DATAPOLL will transfer data from one Datapoint processor to another over standard telephone lines or dedicated lines, using the asynchronous or synchronous communications discipline. All you have to do is tell DATAPOLL where the data is and where you want to put it -- DATAPOLL does the rest. DATAPOLL takes care of file compatibility and error-checking. DATAPOLL features include:

1. A complete communications package which requires no programming.
2. Compatibility with all Datapoint processors (the 1100, 2200, and 5500).
3. Compatibility with all Datapoint data storage devices (cassettes, diskettes, cartridge disks, mass storage disks, and magnetic tape).
4. Compatibility with all Datapoint files.
5. Auto-dial (asynchronous only) and auto-answer capabilities.
6. Powerful error-checking techniques.

#### NOTE

The DATAPOLL Simplified User's Guide is intended as an aid in operation of the various functions and capabilities of DATAPOLL, but if any conflict exists between this Guide and the DATAPOLL User's Guides, the DATAPOLL User's Guides take precedence.

Although DATAPOLL is compatible with all Datapoint file formats, it is necessary to note that there are some restrictions which have been imposed by the wide differences of these formats. One such restriction is that while DATAFORM data may be transferred from one place to another using DATAPOLL, this data can no longer be operated upon by DATAFORM at the receiving station. This is not to imply that other Datapoint software, such as GEDIT, will not be able to handle this data properly.

A second restriction is that DATASHARE and DATABUS executable files may be transmitted by DATAPOLL, but a restriction of the interpreter for these programs is that the executable file resides on contiguous sectors of the disk. If there is more than one segment, the program is no longer executable. Moving this file from one place on the disk to another larger area will solve this problem.

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## **CHAPTER ONE**

### **Introduction**

## **The Problem**

One of the biggest problems of Dispersed Data Processing users has been communicating data between central and remote systems. The traditional difficulty has stemmed from the fact that communications programs are generally one of the most difficult and time consuming tasks a programmer faces in system development. Aside from the technical aspects of programming communications hardware, the programmer is also confronted with system considerations such as error checking and file compatibility.

Data communication is essential to effective business processing in that it eliminates costly and time consuming transport and manual operations.

## **The Solution**

Datapoint has developed DATAPOLL, an easy-to-use communications package that requires no programming. With DATAPOLL you need only specify which data you want transferred and the destination of the data. The package automatically takes care of all the difficult aspects of communications such as file compatibility, error-checking and the line discipline requirements of the communications hardware. DATAPOLL provides the necessary communications programming link between remote and central computing facilities.

DATAPOLL provides the ability to transfer files created by and for any Datapoint program, such as DATABUS, DATASHARE, RPG, BASIC, or DATAFORM, from one Datapoint processor to another.

These files can be transferred over standard telephone lines, using the asynchronous or synchronous communications disciplines, or over dedicated lines, using the synchronous communications discipline.

Files can be transferred between cassettes, magnetic tape, diskettes, cartridge disks, or mass storage disks and file compatibility will be maintained. Data can be transferred directly to a printer or to a file with the directive that the file should be printed after the communication is terminated to reduce line charges.

DATAPOLL also provides a comprehensive error checking facility. This insures that the data is transmitted and received correctly.

All of these things can be done easily and quickly because the DATAPOLL packages do all of the programming work for you. Try it -- you'll find out just how simple it really is!

## **Necessary Equipment**

DATAPOLL can be used with any Datapoint processor, such as a Diskette 1100 (with 16K of memory), a Cassette 1100 (with 8K of memory), a 2200 (with 8K to 16K of memory), or a 5500 (with 24K to 48K of user memory), except a Version I 2200 processor. Each Datapoint processor may support any of the standard Datapoint peripherals. Because the Datapoint 3000, 3300, 3360, and 3600

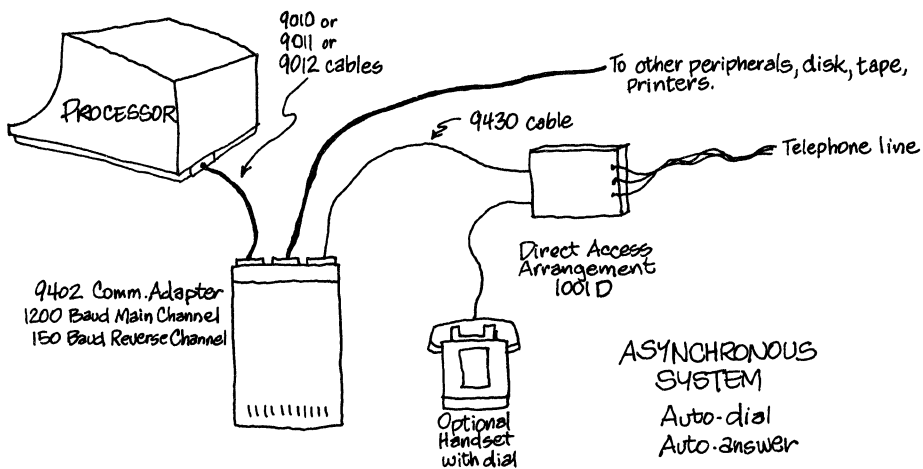
terminals are not processors, they cannot be used with DATAPOLL.

### Synchronous or Asynchronous?

Before you can decide if you want to use synchronous or asynchronous communications equipment, you'll have to take many things into consideration. Generally, asynchronous is the most cost-effective method of data communications. Because Datapoint's asynchronous discipline utilizes a reverse channel for communications acknowledgements, data can be transferred continually at 1200 Baud (bits per second).

However, if you already have synchronous equipment, or if you need to transfer data at 2000, 2400, or at 4800 Baud, the synchronous DATAPOLL packages are for you. It will cost more because Bell Telephone System synchronous modems are generally more expensive, but it may be worthwhile to be able to transfer data at a faster rate. And if you're already using synchronous modems for some other reason (such as for a Remote Job Entry Station for another processor), synchronous communication will not cost you anything extra.

Synchronous DATAPOLL packages do not provide the auto-dial facility. They do, however, provide for auto-answer at the Slave stations.

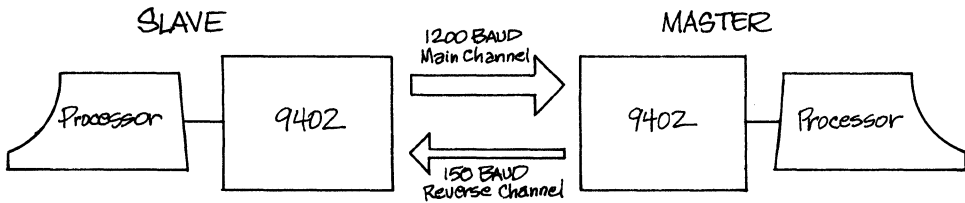


### THE ASYNCHRONOUS SYSTEM EQUIPMENT REQUIREMENTS

#### Asynchronous Equipment

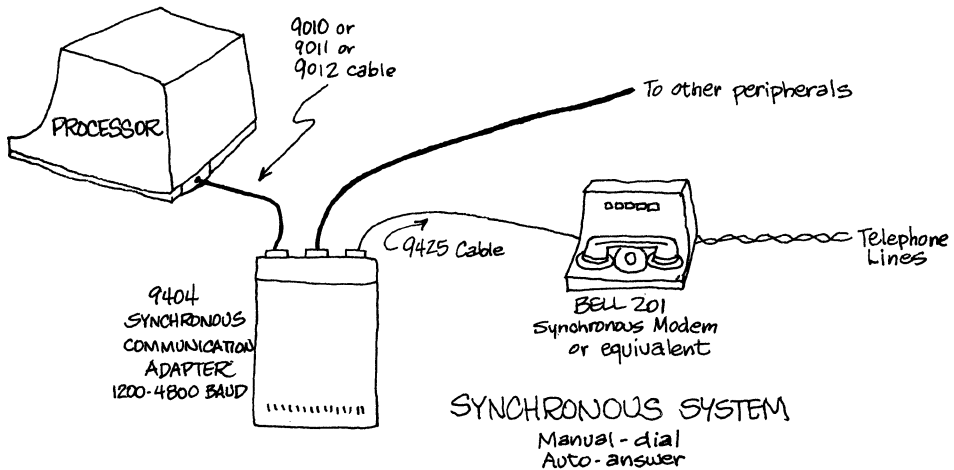
To transmit or receive data asynchronously over standard telephone lines, you need to have a Datapoint 9402 Asynchronous Communications Adaptor/Modem and a DAA (see Appendix B for DAA ordering instructions) attached to your Datapoint processor. You must use the Datapoint 9402, and not a Bell system modem, because DATAPOLL needs to use the 9402's full duplex facilities. This will send data at 1200 Baud, or approximately 120 characters per second, using the main channel, and it will utilize the reverse channel facilities, at 150 Baud, to send communication acknowledgements.





ASYNCHRONOUS DATAPOLL WORKS AT FULL DUPLEX OVER STANDARD TELEPHONE LINES

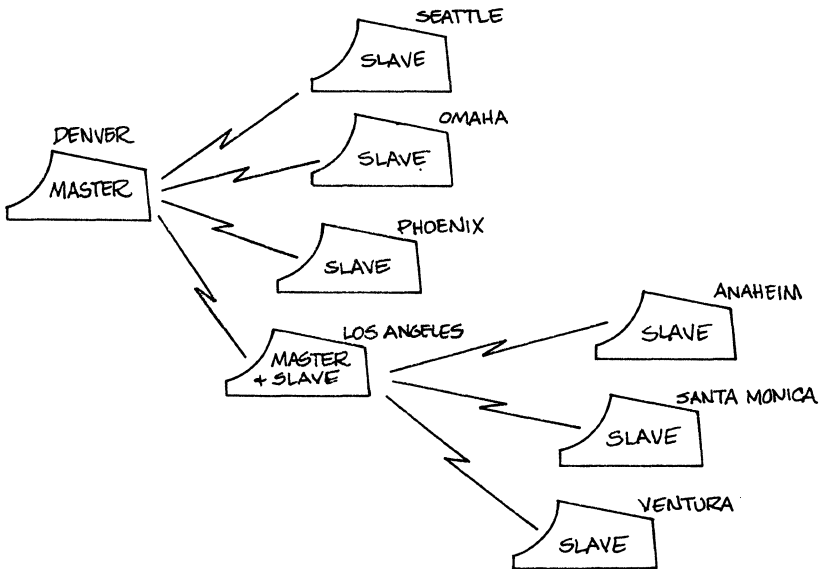
Because the DATAPOLL asynchronous packages operate at full duplex, using both the main and reverse channels, earth satellite telephone channels can be used without any changes in the DATAPOLL packages. Asynchronous DATAPOLL's block numbering technique was made to handle the long transmission delays inherent in satellite communications.



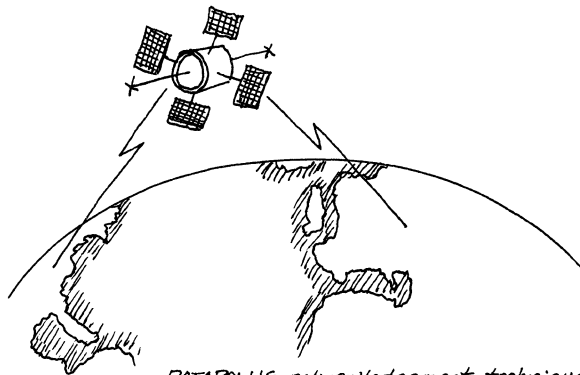
THE SYNCHRONOUS SYSTEM EQUIPMENT REQUIREMENTS

**Synchronous Equipment**

To transmit or receive data synchronously over dedicated or standard telephone lines, you need a Datapoint 9404 Synchronous Communications Adaptor and a Bell Telephone System 201 compatible Synchronous Modem. Datapoint's equipment will allow synchronous communication at 2000, 2400, or 4800 Baud (data speed is controlled by the modem).



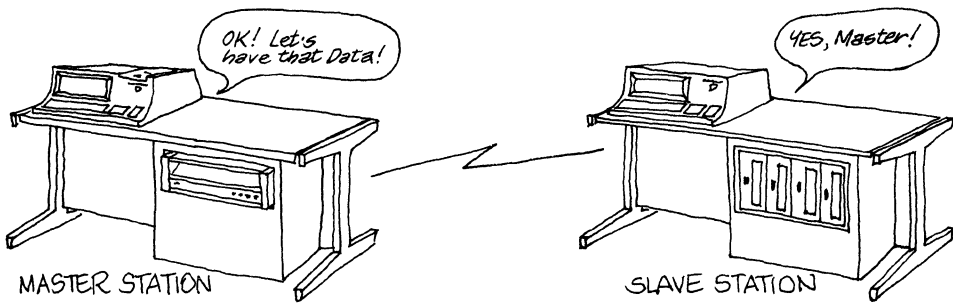
DATAPOLL PROVIDES AN EASY MEANS TO TRANSFER DATA FROM A VARIETY OF LOCATIONS USING STANDARD TELEPHONE LINES EITHER SYNCHRONOUSLY OR ASYNCHRONOUSLY



*DATAPOLL'S acknowledgement technique makes it ideal for using telephone circuits using satellite links.*

### **The Concept of Master and Slave**

Before you can decide which DATAPOLL packages you need, you'll have to understand a fundamental concept of DATAPOLL -- that of Master and Slave stations. In order for communications to occur, one station must call the other. The station that does the calling (or dialing) is the Master station. The station that is called is the Slave station. We call one station a Master and the other a Slave for reference purposes; it has nothing to do with the equipment at those stations. Any Datapoint processor can be Master or a Slave with one exception; a reel-to-reel magnetic tape system cannot be used as a Slave.



### THE MASTER STATION CONTROLS THE SLAVE STATION

Only a Master station and a Slave station can communicate with one another. A Master station cannot communicate with another Master station. The Slave station operates in an unattended automatic mode. The Master station controls the Slave station and tells it what to do. The Master station can operate in attended or unattended mode.

#### **Choose the Right DATAPOLL Package**

Keeping this concept in mind, you can choose the Master program and Slave program to suit your Datapoint system configuration. You can mix and match Master and Slave systems with these two restrictions -- a magnetic tape system cannot be used as a Slave and you cannot mix asynchronous and synchronous Master and Slave programs.

### **The DATAPOLL Packages**

#### **Asynchronous Master Station Programs**

DPDCP -- The Asynchronous Data Collection Program.

DPDCP is a Master station program for magnetic tape or cassette systems with at least 12K of memory. This program is used to collect data from the Slave stations. DPDCP will dial a pre-defined list of telephone numbers, collect any data the Slave has to send, and write that data to either the front cassette or magnetic tape. Support is provided for all of the Datapoint magnetic tape drives. Data can be formatted in ASCII, EBCDIC, or BCD. IBM and ANSI labels are supported and files can be blocked or unblocked. Model Code number 20271.

DPDDP -- The Asynchronous Data Distribution Program.

DPDDP is a Master station program for magnetic tape or cassette systems with at least 12K of memory. This program is used to distribute data to the Slave stations. You will probably want to use DPDDP in conjunction with DPDCP. DPDDP will dial a pre-defined list of telephone numbers and distribute data to the Slave stations from a magnetic tape or the front cassette. DPDDP provides the

same magnetic tape support as DPDCP. Model Code number 20272.

**DPDMP -- The Asynchronous Disk Master Program.**

DPDMP is a Master program for all disk and diskette systems and can be used to transmit data from a disk or diskette and receive data to a disk or diskette. Model Code number 20279 for disks and 20280 for diskettes.

**DPMTM -- The Asynchronous Magnetic Tape Master Program.**

DPMTM is a Master program for disk or diskette systems equipped with a magnetic tape drive. All of the magnetic tape facilities provided in DPDCP and DPDDP are provided in DPMTM. Model Code number 20273.

### **Asynchronous Slave Station Programs**

**DPASP -- The Asynchronous Cassette Slave Program**

DPASP is a Slave station program for cassette systems with at least 8K of memory. DPASP can be used with any of the asynchronous Master station programs. Whether it is communicating with a cassette system, a magnetic tape system, or a disk system, file compatibility is maintained. DPASP can transmit from either cassette deck and receive to either cassette deck or a printer. After the Master station transmits to DPASP, the Master station can order DPASP to print a received cassette off-line to reduce line charges. Model Code number 20270.

**DPDSP -- The Asynchronous Disk Slave Program**

DPDSP is a Slave station program for disk and diskette systems which can be used with any of the asynchronous Master station programs. Whether it is communicating with a cassette system, a magnetic tape system, or a disk system, file compatibility is maintained. DPDSP can transmit or receive multiple files on disk. Data can also be received directly to a printer or the Master station can order DPDSP to print any received data off-line to reduce line charges. Model Code number 20281 for disks and 20282 for diskettes.

### **Synchronous Master Station Programs**

**DPSDCP -- The Synchronous Data Collection Program**

Same as DPDCP but for synchronous systems. Model code number 20276.

**DPSDDP -- The Synchronous Data Distribution Program**

Same as DPDDP but for synchronous systems. Model code number 20277.

**DPSDMP -- The Synchronous Disk Master Program**

Same as DPDMP but for synchronous systems. Model code number 20283 for disks and 20284 for diskettes.  
DPSMTM -- The Synchronous Magnetic Tape Master Program  
Same as DPMTM but for synchronous systems. Model code number 20278.

### **Synchronous Slave Station Programs**

DPSASP -- The Synchronous Cassette Slave Program  
Same as DPASP but for synchronous systems. Model code number 20275.  
DPSDSP -- The Synchronous Disk Slave Program  
Same as DPDSP but for synchronous systems. Model code number 20285 for disks and 20286 for diskettes.

### **Synchronous and Asynchronous Work the Same**

Throughout this book there will be many examples, all of which will use asynchronous program names. Synchronous programs work just the same -- the only differences are in the communications equipment and the corresponding program names, and that synchronous Master programs will not automatically dial the Slave station number.

### **Use of DATAPOLL Outside of the United States**

As a general rule there is no equivalent to the Bell System Direct Access Arrangement (D.A.A.) outside of the United States. This will preclude using the asynchronous DATAPOLL in those situations.

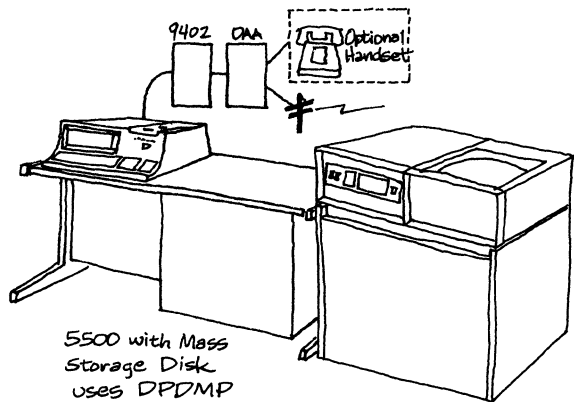
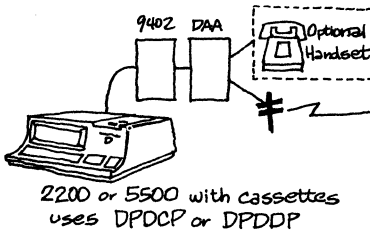
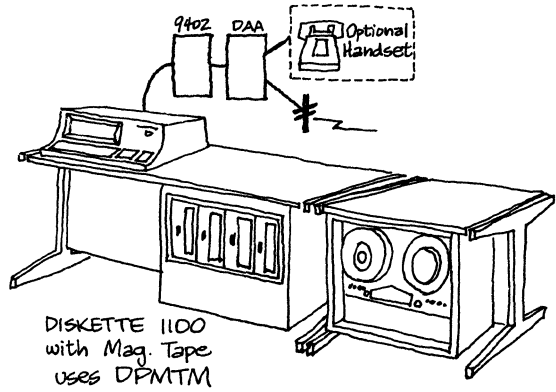
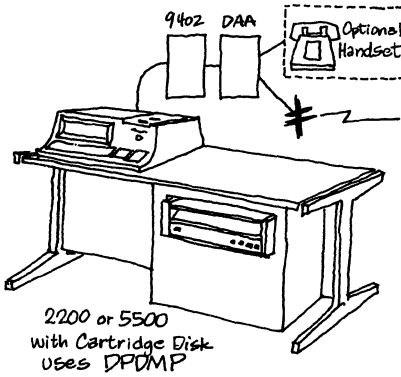
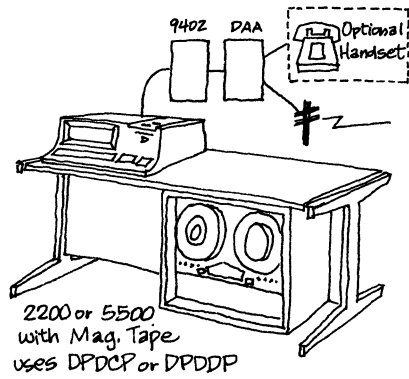
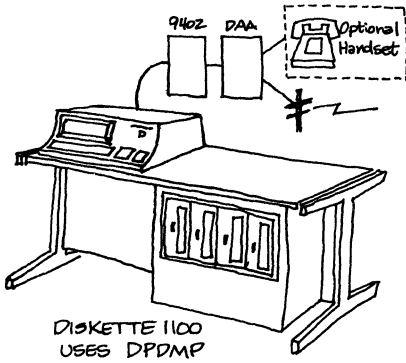
Synchronous DATAPOLL is fully compatible with modems meeting the C.C.I.T.T. recommendation V.26 and may be used exactly as used with Bell System 201-type modems. The Bell System 2400 baud 201-type modem has been used successfully with 2400 baud V.26-type modems in transatlantic operation.

### **The DPMSP Utility**

DPMSP is a stand-alone utility, model code number 20274, that allows you to transfer data from magnetic tape to cassette or vice versa. No communications equipment is needed; therefore, it will work on synchronous or asynchronous systems.

### **Sample System Configurations**

The following drawings show the appropriate Master and Slave station combinations for asynchronous communication. The corresponding synchronous communications equipment and programs can be matched in exactly the same way.

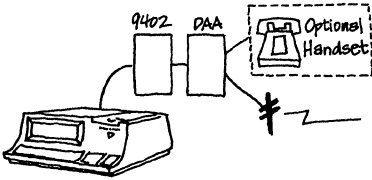


## SAMPLE ASYNCHRONOUS MASTER STATION COMBINATIONS AND PACKAGE NAMES

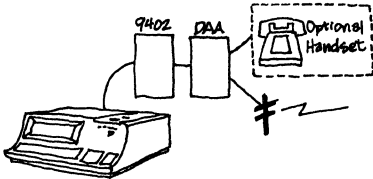
(Synchronous DATAPOLL packages would use a 9404 adaptor and a modem in place of the 9402 and DAA.)

NOTE: The handsets shown are completely optional. They are automatically disconnected during system operation and are only used for alternate voice communication - many systems eliminate them completely.

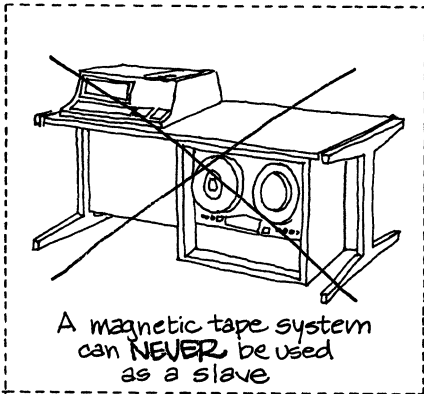
These use DPASP:



CASSETTE 1100

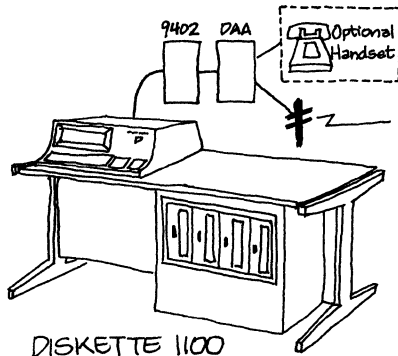


2200 or 5500 with cassettes

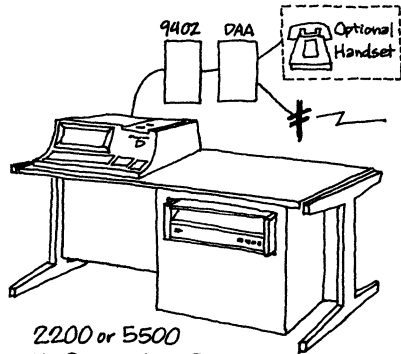


A magnetic tape system can NEVER be used as a slave

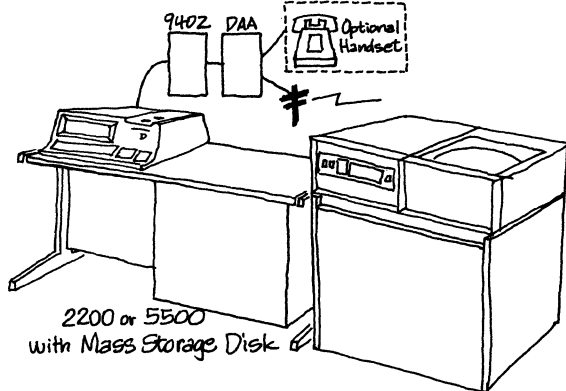
These use DPDSP:



DISKETTE 1100



2200 or 5500 with Cartridge Disk



2200 or 5500 with Mass Storage Disk

**SAMPLE ASYNCHRONOUS SLAVE STATION COMBINATIONS**  
 (Synchronous DATAPOLL packages would use a 9404 adaptor and a modem in place of the 9402 and DAA.)

NOTE: The handsets shown are completely optional. They are automatically disconnected during system operation and are only used for alternate voice communication - many systems eliminate them completely.

EQUIPMENT	MASTER		SLAVE	
	ASYNC.	SYNC.	ASYNC.	SYNC.
Diskette 1100	DPDMP	DPSDMP	DPDSP	DPSDSP
Cassette 1100			DPASP DPASP	DPSASP DPSASP
2200 or 5500 with cassette	DPDCP DPDDP	DPSDCP DPSDDP	DPASP DPASP	DPSASP DPSASP
2200 or 5500 with magnetic tape	DPDCP DPDDP	DPSDCP DPSDDP	DPASP* DPASP*	DPSASP* DPSASP*
2200 or 5500 with disk or diskette	DPDMP	DPSDMP	DPDSP*	DPSDSP*
Diskette 1100 with magnetic tape	DPMTM	DPSMTM	DPDSP*	DPDSP*
2200 or 5500 with disk and magnetic tape	DPMTM	DPSMTM	DPDSP*	DPSDSP*

\* You cannot use magnetic tape as a Slave; you must use disk, diskette, or cassette.

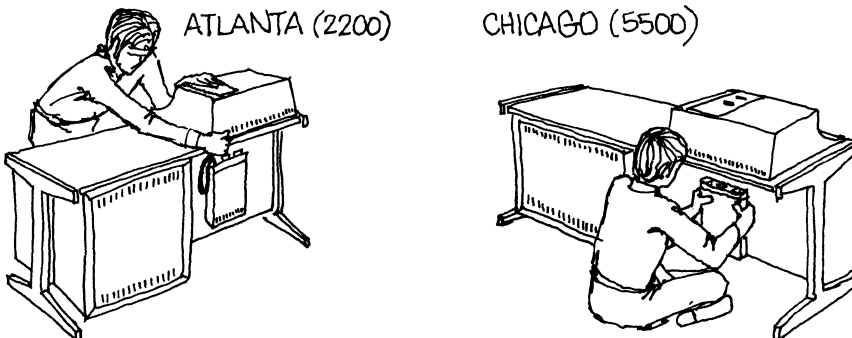
**SELECT THE DATAPOLL PACKAGE TO SUIT YOUR EQUIPMENT CONFIGURATION**

**An Example**

The following example shows just how easy data communications can be. Here, the data in the front cassette of a Datapoint 5500 processor in Chicago needs to be transferred to the front cassette of a Datapoint 2200 processor in Atlanta. Here's how we'll do it:

**1. Get the Necessary Communications Equipment**

Because we'll be using standard telephone equipment to transfer the data, we'll need the Datapoint 9402 Asynchronous Communications Adaptor and a DAA (see Appendix B for DAA ordering instructions). These will have to be attached to both Datapoint processors.



**ATTACH THE 9402 AND DAA TO THE DATAPPOINT PROCESSORS**



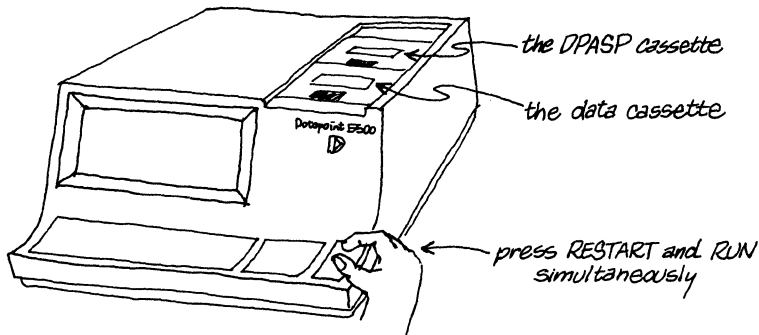
## 2. Select the Master and Slave Programs

The 2200 processor in Atlanta will be the Master station. Because it is cassette oriented and will collect the data, we'll use the DPDCP package.

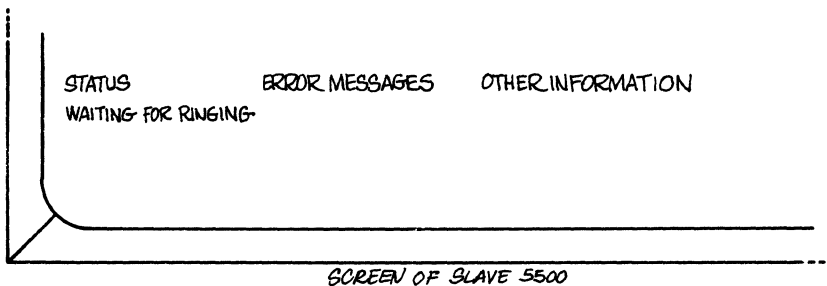
The 5500 processor in Chicago will be the Slave station. DPASP is the Slave package the processor will use. (A 2200 could, of course, be used).

## 3. Start Up the Slave Station

The Slave DPASP package is very easy to set up. All we have to do is have someone put the DPASP cassette in the rear cassette deck and the data cassette in the front cassette deck of the 5500 in Chicago. Once someone simultaneously presses both the RESTART and RUN Keys, DPASP will start running and will wait for the Master station to tell it what to do.



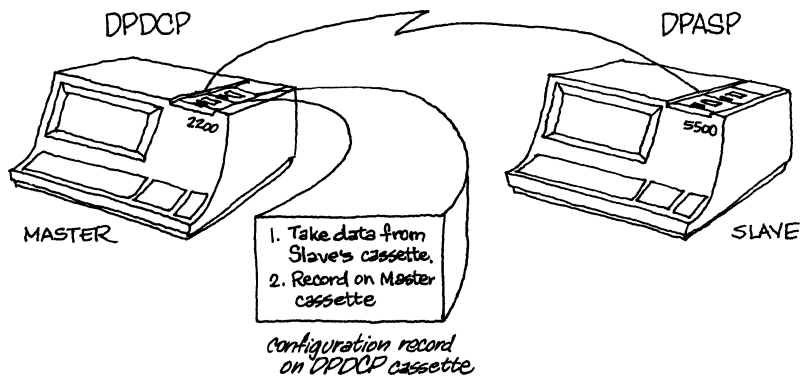
START UP DPASP ON 5500



DPASP WAITS FOR MASTER TO CALL

## 4. Specify the Master Station Configuration

The Master station configuration record describes the medium where the data resides. We're using cassette tape, so the configuration record will have to specify cassettes.



**THE DPDCP PACKAGE CONTAINS A CONFIGURATION RECORD TELLING THE DESTINATION OF THE DATA AND A PHONE LIST**

The DPDCP cassette goes in the rear cassette deck of the 2200 in Atlanta. We must press RESTART and immediately hold down both the KEYBOARD and DISPLAY Keys until the configuration record is loaded. Each configuration value and variable will appear, one at a time, on the screen.

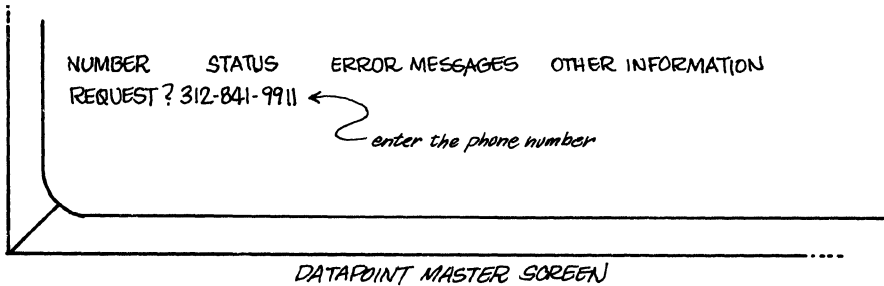
We must press ENTER to accept a preset value, or type in a new value and press ENTER to change a value. The values are presented in this order, and this is what we'll do:

1. Tape Transport Type -- type "C" (for cassette) and press ENTER.
2. Number of Retries on Dial-up -- we'll press ENTER to accept the preset value of four.
3. Dial-Tone Wait Time -- we'll press ENTER to accept the preset value of five (seconds).
4. Permanent Change? -- type "Y" if you want these changes to be permanent, or "N" if you only want these changes for this DPDCP run, and press ENTER.

DPDCP now knows where the data resides and where we want to put the data at the Master station.

**5. Operating DPDCP**

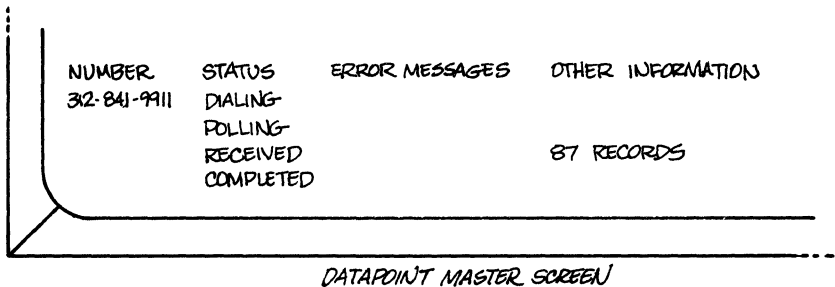
Now that DPDCP knows how our system is configured, it automatically begins to run DPDCP.



### DPDCP INTRODUCTORY MESSAGES

DPDCP displays its introductory messages. We must enter the phone number of the Chicago terminal to establish communications.

DPDCP now does all of the work for you. You can see what it is doing by looking at the messages on the screen of the Datapoint 2200 in Atlanta (the Master station) and the 5500 in Chicago (the Slave station). DPDCP dials the telephone number, sets up the communications link, and transfers the data from the front cassette of the 5500 to the front cassette in Atlanta, then hangs up.



### DPDCP MESSAGES AT MASTER STATION

## 6. That's It!

That's how easy the DATAPOLL packages are to use! Read the program descriptions in the next chapter. You'll find that not only is DATAPOLL easy to use, but also that you do not need to know anything about communications theory to use DATAPOLL.

## **CHAPTER TWO**

### **How to Use DATAPOLL**

## **Introduction**

One of the features of DATAPOLL is that it is very easy to use. Once you have the necessary equipment and the appropriate Master and Slave packages, the rest of your task involves instructing DATAPOLL what you want it to do.

This chapter is divided into sections which explain how each Master and Slave program works. If you're still unsure of which programs to use, read the introductory paragraphs of each section. Continue reading and you'll discover just how easy data communications can be!

Remember that the Master station is the controller and the Slave station obeys the Master station's orders.

## SECTION 1

### The Disk Master Programs (DPDMP and DPSDMP)

#### Introduction

DPDMP and DPSDMP are the Master programs used by all Datapoint disk and diskette systems. DPDMP is used with asynchronous systems and DPSDMP is used with synchronous systems (see the Equipment Needed section of Chapter 1). Though we'll use the asynchronous program name throughout this section, the synchronous program works in much the same way except that you will have to physically dial the telephone number to make a synchronous connection over standard telephone lines. DPDMP can be used to collect data from and distribute data to the Slave stations. It is compatible with both Slave station programs, so you can communicate with cassette or disk systems.

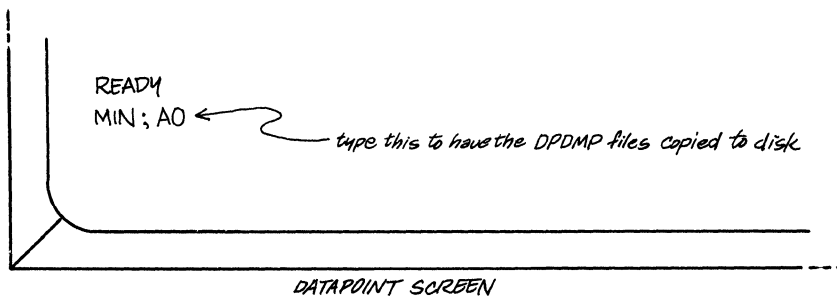
#### If You've Got a Diskette System....

Get a copy of Datapoint's readymade DATAPOLL DPDMP diskette, model code number 20280. This diskette also includes all the standard DOS (Disk Operating System) files. Turn your diskette system ON, put the DPDMP diskette in Drive 0 (the drive on the left on all Diskette 1100 systems) and press the RESTART key. Check the "Guide to Operating Datapoint Equipment" if you're not acquainted with the Diskette 1100. You'll soon see the DOS.C message and 'READY' displayed on the screen of your Datapoint processor.

#### If You've Got a Cartridge or Mass Storage Disk System....

Turn your disk system ON, put your DOS boot tape in the rear cassette deck, and press the RESTART Key (on a 5500 you must press both the RESTART and RUN Keys simultaneously). (Check the "Guide to Operating Datapoint Equipment" if you're not acquainted with the Datapoint equipment). DOS will respond with 'READY'.

If you do not already have the Disk Master Program on your disk, put the DATAPOLL DPDMP cassette tape, model code number 20279, in the front cassette deck, type "MIN ;AO", and press the ENTER key. This will transfer the DPDMP files to your disk.

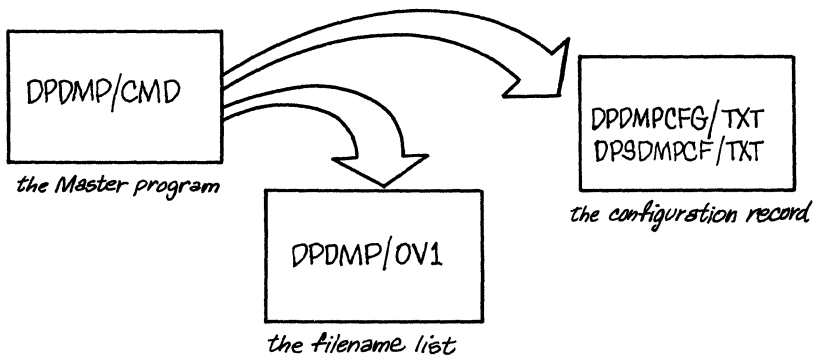


COPY DPDMP FILES TO DISK

## The Three Important Files

You should now have these three files on your disk or diskette:

1. DPDMP/CMD -- The command file for the Master program itself.
2. DPDMP/OV1 -- The file that is used to store the list of file names which are to be transmitted or received. The Master program refers to this file during operation.
3. DPDMPCFG/TXT -- The configuration record, which contains the number of dial-up attempts allowed (4) and the time allowed for the dial tone wait (5 seconds). You'll learn how to change these values later. The Master program refers to this file during operation. (**NOTE:** DPDMPCF/TXT contains the configuration record for synchronous systems).

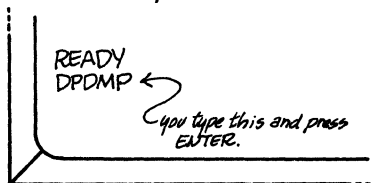


THE DPDMP FILES

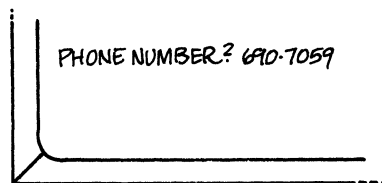
## Operating Procedures

First of all, make sure that your Slave station is ready. See the appropriate Slave station program descriptions for this. To use DPDMP all you have to do is load DPDMP, enter a phone number, and type in a command. DPDMP does all the work.

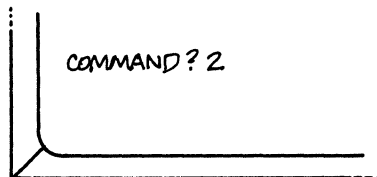
*This is what you have to do:*



1. Load DPDMP



2. Enter the phone number



3. Type command (see command list)

DATAPOLL AND DPDMP DO THE REST!

Once DOS has responded with "READY", type "DPDMP" and press the ENTER key. DPDMP will respond with "DATAPOLL Disk Master Program 2.1" and "PHONE NUMBER?" Respond to this question with an asterisk (\*) and press ENTER if you want to return to DOS or a valid phone number if you want to call a Slave station.

Valid phone numbers consist of up to 16 digits, optionally separated by asterisks (to denote a wait for a dial tone) or dashes (to promote easy readability). Here are some valid phone numbers:

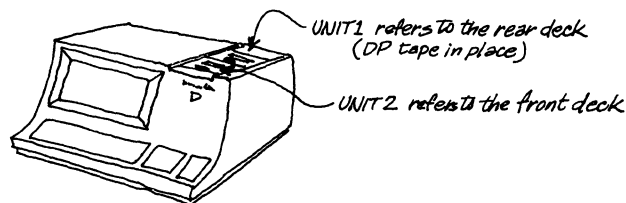
7059	A PBX or Centrex extension.
690-7059	A local number from a private line.
9*690-7059	A local number from a Centrex system.
1*690-7059	A long distance number in the same area code from a private line.
9*1*690-7059	A long distance number in the same area code from a Centrex system.
1*512-690-7059	A long distance number from another area code from a private line.
9*1*512-690-7059	A long distance number from another area code from a Centrex extension.

After a phone number is typed, the ENTER key must be pressed. If an asterisk or a properly formatted phone number is not entered, DPDMP will Beep and allow you to try again.

Next you will be asked to enter a command. When "COMMAND?" is displayed on the screen, enter one of the commands listed under "COMMANDS", below. If you enter something other than one of these commands, DPDMP will Beep and you'll be given another opportunity to enter a command.

### UNIT1 and UNIT2

Before you can understand these commands, you must understand the meaning of UNIT1 and UNIT2. If the Slave station is a cassette system, UNIT1 refers to the rear cassette deck file and UNIT2 refers to the front cassette deck file.

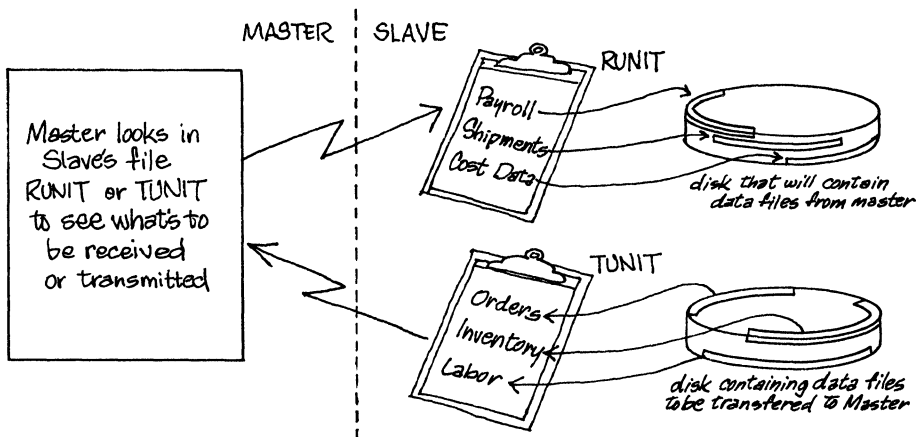


### UNIT1 AND UNIT2 ON A CASSETTE SLAVE SYSTEM

If the Slave station is a disk or diskette system, UNIT1 and UNIT2 refer to files at the Slave station which contain the names of files that are to be transmitted or received. UNIT1 refers to a file named TUNIT1/TXT or RUNIT1/TXT and UNIT2 refers to a file named TUNIT2/TXT or RUNIT2/TXT. The TUNIT1/TXT and TUNIT2/TXT files contain the list of file names which are to be transmitted to the Master



station. The RUNIT1/TXT and RUNIT2/TXT files contain the list of the file names where the received data is to be written.



RUNIT AND TUNIT CONTAIN FILE NAMES TO BE TRANSFERRED OR RECEIVED

For example, if we told DPMP to transmit to UNIT1 at a disk Slave station, the Slave station would use RUNIT1/TXT to obtain a list of file names where the received data is to be written. See the DPMP Slave station description for the details of how to set these files up.

### Commands

The following are valid commands. Press ENTER after typing in a command.

- ? Command Display  
Display a list of all valid commands.
- \* Halt Operation  
Terminate the present operation. If an asterisk is entered in response to "PHONE NUMBER?", DPMP will close all data files and return to DOS. If it is entered after "COMMAND?", DPMP will close all files and terminate the present connection and request another phone number. If it is entered in response to "FILE NAME?", DPMP will redisplay "COMMAND?" and start over from there. If one or more file names have been entered after the program requested "FILE NAME?", an asterisk will terminate the list of file names. An asterisk is also used to terminate "as is" text.
- 1 Transmit to Front Cassette  
Transmit to UNIT1 at the Slave station. At this point, DPMP does not know which files to transmit, so it will ask "FILE NAME?" Enter a file name and press the ENTER Key. DPMP will

continue to ask for file names until you type an asterisk (\*) and press ENTER.

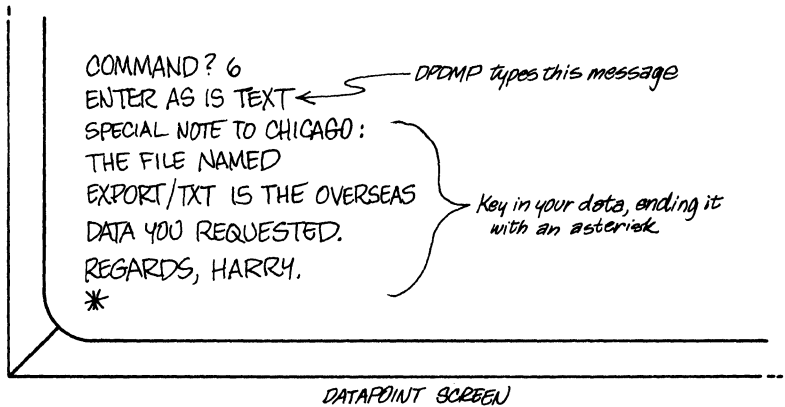
```
READY
DPDMP
DATAPOLL DISK MASTER PROGRAM VERSION 2.1
PHONE NUMBER? 690-7059
COMMAND? 1
FILE NAME? PRO1/ABS ← Transmit file PRO1/ABS
FILE NAME? INST/TXT ← then transmit file INST/TXT
FILE NAME? * ← end of list of files
```

*DATAPOLL SCREEN*

COMMAND 1 TRANSMITS FILES TO SLAVE UNIT1

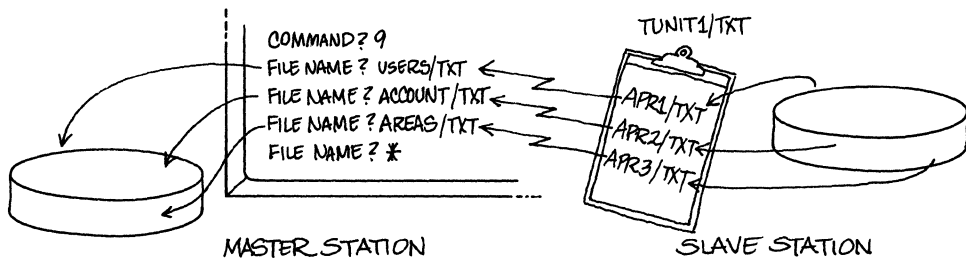
- 2 Transmit to Rear Cassette  
Transmit to UNIT2 at the Slave station. This command works exactly as command 1 except that UNIT2 is used instead of UNIT1.
- 3 Transmit to Printer Only  
Transmit to the printer at the Slave station. This command works exactly as command 1 except that the data is sent to the printer instead of UNIT1.
- 4 Transmit to Rear Cassette and Print Off-Line  
Transmit to UNIT1 at the Slave station and, after all files have been transmitted, terminate the connection and print the files at the Slave station. This command works exactly as command 1 except that the off-line printing facility is also used.
- 5 Transmit to Front Cassette and Print Off-Line  
Transmit to UNIT2 at the Slave station and after all files have been transmitted, terminate the connection and print the files at the Slave station. This command works exactly as command 4 except that UNIT2 is used instead of UNIT1.
- 6 Accept Keyboard Data and Transmit to Rear Cassette  
Transmit the data that you will enter at the keyboard to UNIT1 at the Slave station. This data can be anything you want to type in. DPDMP asks "ENTER AS IS TEXT" and then you can type

in your data. A new line can be started by pressing the ENTER Key. There is no limit to the amount of data that can be entered. The data is stored in a temporary file at the Master station until you type an asterisk in the first position in a line. At that time, the data is sent to UNIT1 at the Slave station.



#### TRANSMITTING KEYBOARD ENTRY DATA

- 7 Accept Keyboard Data and Transmit to Front Cassette  
Transmit "as is" text to UNIT2. This command works exactly as command 6 except that the "as is" text is transmitted to UNIT2 of the Slave station.
- 8 Accept Keyboard Data and Display on Slave Screen  
Transmit a message to the display screen of the Slave station. DPDMP asks "ENTER MESSAGE", and then you type in your message. Once the ENTER Key is pressed, the message is transmitted to the Slave station and will appear on the Slave's screen.
- 9 Receive Rear Cassette and Load on Disk  
Receive UNIT1 from the Slave station. DPDMP asks "FILE NAME?" Enter the filename you want to use for the first data file received and press ENTER. DPDMP keeps asking for file names until you end the list with an asterisk (\*).



- 10      Receive Front Cassette and Load on Disk  
 Receive UNIT2 from the Slave station. This command works exactly as command 9 except that UNIT2 is received instead of UNIT1 and TUNIT2/TXT is used instead of TUNIT1/TXT.
- 11      Accept Screen Message from Slave  
 Request a message from the Slave station. The message "KEYIN REQUESTED" is displayed at the Slave station and the cursor is positioned at the lower left hand corner of the Slave station screen. The person at the Slave station then enters a message and terminates the message by pressing the ENTER key. The message is transmitted to the Master station where it is displayed on the display screen. (There is a 30 second timeout between characters typed at the Slave if nothing is sent from Slave).
- 12      Print Received Data with Carriage Controls  
 Tell the Slave station that everything that is to be printed contains carriage control information in the first character of each line. The first character in each line is never printed because it contains carriage control information. The second character of each line is printed in column 1 of the printer. Valid carriage control characters are:
- |       |                                    |
|-------|------------------------------------|
| Blank | Space one line before printing.    |
| 0     | Space two lines before printing.   |
| -     | Space three lines before printing. |
| +     | Suppress spacing before printing.  |
| 1     | Skip to top of form.               |

Normally, the paper is single spaced after printing each line with a page eject after every 54 lines.

- 13 Return Slave to DOS Control  
(For disk Slave stations only)  
Send a command to the Slave station so that the Slave station will close all data files and go back to DOS (and out of the Slave program). DPDMP then terminates the connection and requests another phone number.
- 14 Create Slave Files  
(For disk Slave stations only) Create the control file specified at the Slave station. If the control file specified does not exist, it will be created. If it exists, it will be overwritten. This is used to create RUNIT1/TXT, RUNIT2/TXT, TUNIT1/TXT, or TUNIT2/TXT from the Master station. DPDMP displays this message: "SELECT ONE OF THE FOLLOWING CONTROL FILES TO BE CREATED AT THE SLAVE STATION: 1=RUNIT1 2=RUNIT2 3=TUNIT1 4=TUNIT2". After you respond with a 1, 2, 3, or 4, DPDMP asks "ENTER LIST OF FILE NAMES: (ONE FILE NAME PER LINE)". Enter the file names that go into to control file specified, terminating the list with an asterisk in column 1 of a line.

```

COMMAND ? 14
SELECT ONE OF THE FOLLOWING CONTROL FILES TO BE CREATED
AT THE SLAVE STATION:
1 = RUNIT1
2 = RUNIT2
3 = TUNIT1
4 = TUNIT2
3
ENTER LIST OF FILE NAMES (ONE FILE NAME PER LINE)
APRIL1
APRIL2
*

```

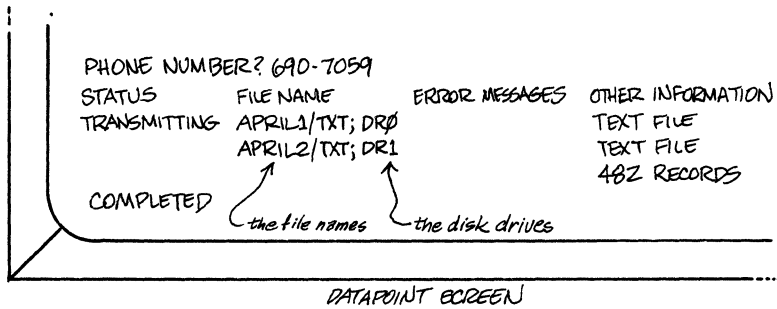
DATAPOINT SCREEN

### CREATING TUNIT1/TXT FROM THE MASTER STATION

In the above example, TUNIT1 is created at the Slave station. TUNIT1 contains the list of file names to be transmitted (APRIL1 and APRIL2). The next command could be a 9, which would transmit the files listed in this newly-created TUNIT1.

### Executing a Command

After a valid command has been entered and any pertinent information (file names, messages, etc.) has been entered, the command is executed. While the command is being executed, DPDMP displays several messages, as shown in the following illustration:



SAMPLE DPDMP EXECUTION MESSAGES

This is what these messages mean:

PHONE NUMBER -- The current phone number.

STATUS -- One of the following messages:

- DIALING
- REDIALING
- POLLING
- TRANSMITTING
- RECEIVING
- COMPLETED
- INCOMPLETE

FILE NAME -- The name of the file currently being used.

ERROR MESSAGES -- Error messages reflect either device errors or a timeout. A device error happens when a device (printer, disk, etc.) is not acting the way it should; one example is trying to send a file to be printed at the Slave station when the printer is not turned on. A number from 1 to 99 is given; see Appendix A for these error messages.

A timeout occurs if thirty consecutive seconds go by and DPDMP has not received a valid message. This can denote either a very bad phone connection or a power failure at the Slave station. In either case, DPDMP tries to re-establish communications up to the maximum amount of times according to the value in the configured record. If the maximum number of retries has been reached, DPDMP will Beep once every second until you press the ENTER key to acknowledge the abnormal condition.

Once DPDMP re-establishes communications with the Slave program, it will automatically recover from the timeout and correctly complete transmission of the file that was interrupted.

OTHER INFORMATION -- This includes the type of file (text or object) and the number of records transmitted or received.

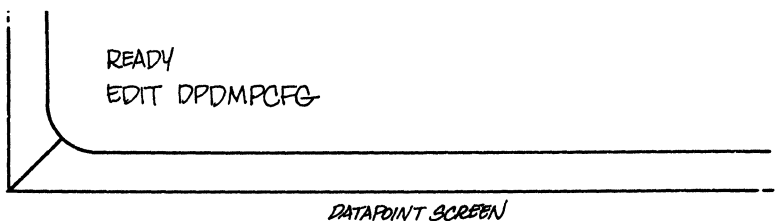
## Summary of DPDMP Commands

Command	Meaning
1	Transmit to UNIT1.
2	Transmit to UNIT2.
3	Transmit to printer.
4	Transmit to UNIT1 and print off-line.
5	Transmit to UNIT2 and print off-line.
6	Transmit "as is" text to UNIT1.
7	Transmit "as is" text to UNIT2.
8	Transmit message to Slave display screen.
9	Receive UNIT1 from Slave.
10	Receive UNIT2 from Slave.
11	Receive message from Slave.
12	Set printer control flag.
13	Return Slave station to DOS.
14	Create control file at Slave.
*	Terminate present operation.
?	List commands.

## Changing the Configuration Record

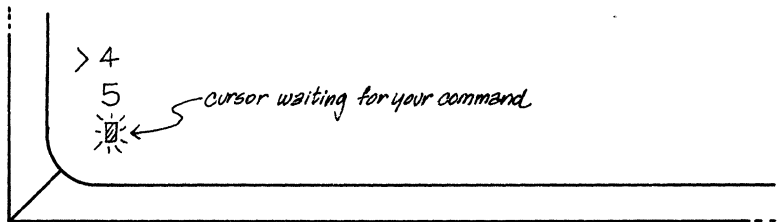
The DPDMPCFG/TXT file contains the configuration record. The configuration record consists of two values: the number of dial-up attempts allowed (4) and the time allowed for the dial tone wait (5 seconds). Remember that the configuration record is named DPDMPCF/TXT for synchronous systems.

You can easily change these values by using the DOS EDIT program. To change the values in this file, type "EDIT DPDMPCFG/TXT" and press ENTER.



CALLING THE EDITOR PROGRAM

The screen will then blank out with an arrow in the first column. Press both the KEYBOARD and DISPLAY Keys simultaneously until the two configuration values appear on the screen. Using the KEYBOARD Key to move the arrow up or the DISPLAY Key to move the arrow down, point to the line you want to change.



### DATAPOINT SCREEN CHANGING A CONFIGURATION VALUE

With the arrow pointing at the appropriate line, type ":DEL" and press ENTER. This will delete the line and wait for new input. For example, to change the number of dial-up attempts allowed from 4 to 6, point to the line with the 4 and type ":DEL" and press ENTER. Then type "6" and press ENTER. Type ":END" to end the files, then press ENTER. The next time you use DPDMP, the program will allow for 6 dial-up attempts.



## SECTION 2

### The Data Collection Master Programs (DPDCP and DPSCDP)

#### Introduction

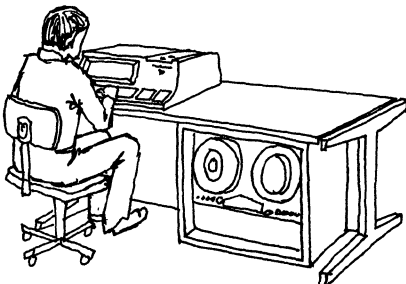
DPDCP and DPSCDP are the data collection Master programs for magnetic tape and cassette systems. These are companion programs to DPDDP and DPSDDP, which are the data distribution Master programs. DPDCP is used with asynchronous systems and DPSCDP is used with synchronous systems (see the Equipment Needed section of Chapter One). Though we'll use the asynchronous program name throughout this section, the synchronous program works in much the same way except that you'll have to physically dial the telephone number to make a synchronous connection over standard telephone lines.

DPDCP will dial a pre-defined list of telephone numbers, receive any information the Slave station has to transmit, and record that information on magnetic tape or the front cassette.

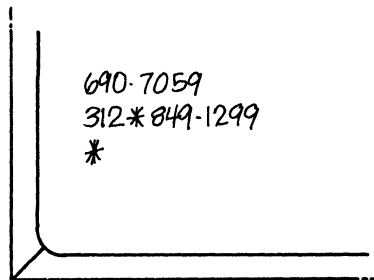
DPDCP is released as a stand-alone program on a load-and-go (LGO) cassette tape, model code 20271. The DPDCP cassette tape contains these three files:

1. The DPDCP program itself.
2. The configuration record, which contains several program control values.
3. The telephone list, used when operating in automatic mode.

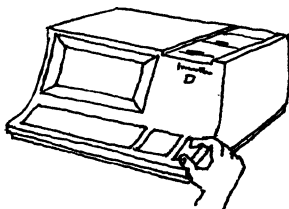
*You must do these things:*



1. *Specify the Configuration record to match your system.*



2. *Create a telephone list file (optional)*



3. *Load DPDCP*



4. *Enter a Command*

*DPDCP does the rest!*

## The Configuration Record

The configuration record describes the type of magnetic tape system you are using. You will not need to change this record if:

1. You're using an 800 BPI 9-track magnetic tape transport system.
2. You want to put industry-compatible ANSI magnetic tape labels on your magnetic tape.
3. You are creating the first data tape. If the data spans more than one magnetic tape and you want to start operating on the second tape, you'll need to change this value.
4. You want to write standard ASCII code.
5. You want to write unblocked magnetic tape records.
6. You do not want to accept incomplete files (files interrupted due to file parity errors, line transmission problems, etc).
7. You want the package to attempt to establish communications four times before giving up.
8. You'll let the program wait five seconds for a dial tone.

But if you need to change any of these values, you'll need to change the second file on the DPDCP cassette tape. That's easy to do. Put the DPDCP cassette in the rear cassette deck and press the RESTART Key and IMMEDIATELY hold down the KEYBOARD and DISPLAY Keys while DPDCP is being loaded.

This causes the configuration record variables to be displayed on the screen, one at a time, with their current values. Press the ENTER Key to accept the current value. If you want to change a value, type it in and press ENTER. If you try to enter an unacceptable value, it will not be accepted and you'll be given another chance to enter an acceptable value.

The variables and values are presented in the following order:

### 1. Tape Transport Type

The possible tape transport values are:

Value	Transport
9N	9-track 800 BPI (preset value)
7N	7-track 556 or 800 BPI
9P	9-track 1600 BPI
C	Front Cassette (if C, skip to step 7.)

### 2. Magnetic Tape Labels

The labeling configuration is ignored when the tape transport type is the front cassette. The possible labeling configurations and their values are:

Value	Label Type
A	ANSI compatible (preset value)
I	IBM OS compatible
N	No labels at all (a single file mark after each file, a double file mark after the last file)

### 3. Initial Magnetic Tape Volume Serial Number

A volume serial number is written at the beginning of each volume (here a volume is a magnetic tape reel). DPDCP is configured to put a volume serial number of 000001 on the first (initial) volume, and increment the volume serial number by one for every succeeding volume. If you need to start numbering at any other volume serial number, change 000001 to the 6 digit number you want to use.

### 4. Code Set

The code set configuration is ignored when the tape transport type is the front cassette. The possible code set configurations and their values are:

Value	Code Set
B	7-track BCD
A	9-track ASCII (preset value)
E	9-track EBCDIC

### 5. Blocking

The blocking configuration is ignored when the tape transport type is the front cassette.

Unblocked records are variable in length, containing a maximum of 249 bytes (one character is one byte). Each record can be a different length. If a record should contain more than 249 characters, it must be split in two or you will lose the excess characters.

When you block records, you can put more than one record into a block. Each record must be a certain length, so it is padded with blanks or truncated (cut off) to meet that length. Each record is called a logical record and each block is called a physical record.

43511 GEORGETOWN ST. COLUMBUS MO.

2785 BLACKSTONE CHICAGO ILL.

411 FIRST ST. DALLAS TEX.

UNBLOCKED RECORDS ARE OF VARYING LENGTHS

4	3	5	1	1	G	E	O	R	G	E	T	O	W	N	S	T.	C	O	L	U	M	B	U	S	M	O.
2	7	8	5		B	L	A	C	K	S	T	O	N	E	C	H	I	C	A	G	O	I	L	L		
4	1	1			F	I	R	S	T	S	T	D	A	L	L	A	S	T	E	X						

*these blanks will be stuffed in for you* →

**BLOCKED RECORDS CONSIST OF LOGICAL RECORDS THAT ARE ALL THE SAME SIZE**

The possible blocking configurations and their values are:

Value	Blocking
U	Unblocked (maximum 249 characters)
nXm	Blocked - where n=number of characters per logical record (maximum of 249) and m=number of logical records per physical record (maximum of 255)

**NOTE:** When using blocked records, the maximum product of n and m is 1057 characters if you're using a 7-track or 9-track 556 or 800 BPI tape drive, and 2048 characters if you're using a 9-track 1600 BPI tape drive.

6. Incomplete Files

Transmitted files can become incomplete because of an impossible telephone connection, source parity error, etc. The possible incomplete file configuration values are:

Value	Configuration
N	NO -- do not accept incomplete files
Y	YES -- accept incomplete files

7. Number of Retries on Dial-Up

DPDCP will attempt to ring a particular number on the phone list a certain number of times. This number is initially set to four, but you can change it to any number from 1 to 9.

8. Time for Dial-Tone Wait

This is the wait time for a dial tone each time an asterisk is encountered in a dialed telephone number (i.e., going from an internal CENTREX system to an outside line). The dial-tone wait time can be assigned any two-digit value from 01 to 99 seconds, and initially is set at 05.

9. Permanent Change

The message "PERMANENT CHANGE?" is displayed after all configuration values have been

handled. If you want to go right into the telephone list file, hold down the DISPLAY Key while you press ENTER. Otherwise, you will immediately go into DPDCP execution once ENTER is pressed.

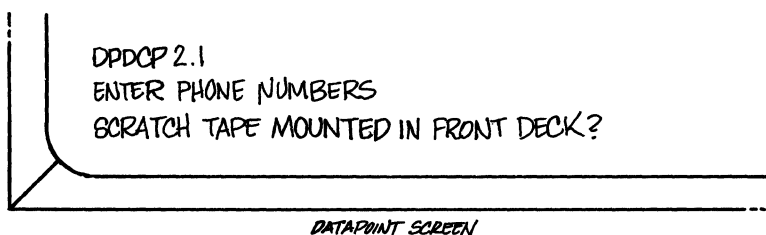
Value	Action
N	No -- not a permanent change. The modified configuration values are to be used for the current session only.
Y	Yes -- a permanent change. The configuration record is rewritten to contain the currently established configuration values.

### Creating a Telephone List File

Now that your configuration record matches the system you are using, you can create a telephone list file for use in the automatic operation mode. In this mode, DPDCP uses this file to obtain Slave station telephone numbers. This file can contain as many telephone numbers as you want to put in it (the only limit is the physical capacity of the cassette). If you want to manually enter the phone numbers when you run the program, if the program is configured for cassettes, or if you're using the Synchronous package, you can skip this step.

DPDCP reads a number from the telephone list file, dials that number, and collects any data the Slave station has, storing the data on magnetic tape or cassette at the Master station.

To create a telephone list file, press the RESTART Key and IMMEDIATELY press and hold down the DISPLAY Key while DPDCP is being loaded (you must press both RESTART and RUN on a 5500 instead of just RESTART). Your screen will soon look like this:



### CREATING THE TELEPHONE LIST FILE

Put a blank cassette tape in the front cassette deck and answer "Y" and press ENTER. This cassette is used for the temporary storage of your telephone list file. Once you're done creating the list, the list is written back onto the DPDCP cassette. The screen will roll up so you can enter the telephone numbers, one per line. Press the ENTER Key after each line is typed in. The program checks all data entered to insure that only the digits 0-9, an asterisk, or a dash is entered.

Telephone numbers consist of up to 16 digits, optionally separated by asterisks (to denote a wait for a dial tone), or dashes (to

promote easy readability). These are valid telephone numbers:

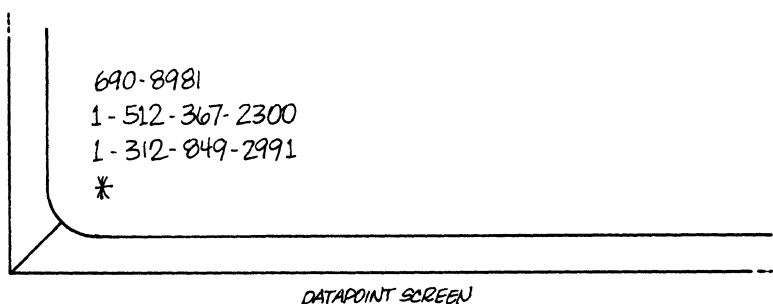
7059	A PBX or Centrex extension.
690-7059	A local number from a private line.
9*690-7059	A local number from a Centrex extension.
1*690-7059	A long distance number in the same area code from a private line.
9*1*690-7059	A long distance number in the same area code from a Centrex extension.
1*512-690-7059	A long distance number in another area code from a private line.
9*1*512-690-7059	A long distance number in another area code from a Centrex extension.

Before the ENTER Key is pressed at the end of each entry, the BACKSPACE Key can be used to erase the last character entered and the CANCEL Key can be used to erase the entire line so you can start over.

After the ENTER Key is pressed, changes can still be made. Move the arrow to point to the line you want changed by using the KEYBOARD Key to move it up and the DISPLAY Key to move it down. Then type in one of the following EDIT commands:

- :DEL Delete the line pointed to by the arrow.
- :INS Insert a line after the line pointed to by the arrow.

After the list is completed and corrected, type "":END"" to close the file.



#### THE TELEPHONE LIST

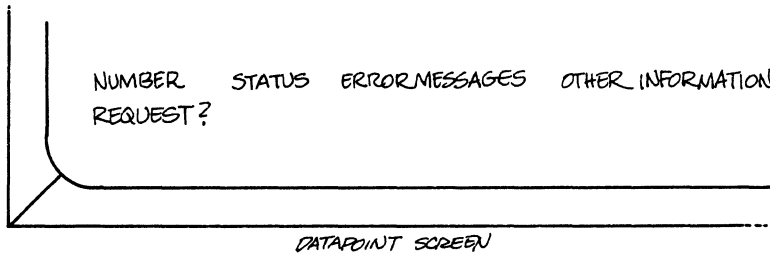
### Updating the Telephone List File

To update or change the telephone list file, proceed as though you were creating a new telephone list file, inserting a blank cassette in the front cassette deck. Use the EDIT commands to change the list, press both the DISPLAY and KEYBOARD Keys to display the list, and be sure to type "":END"" to close the configurator file.

### Operating Procedures

Now that your system is properly configured and your telephone list is all set up (if you're using one), press RESTART (or RESTART and RUN if you're using a 5500) to load DPDCP. If you changed the

configuration record, DPDCP will automatically be loaded for you. After DPDCP has been loaded, the following message will appear on the screen:



### DPDCP INTRODUCTORY MESSAGES

If the program has been configured for cassettes, enter a telephone number (of the form given in the telephone list file section) in response to "REQUEST?". DPDCP will then dial that number and transfer information from the Slave station to the front cassette.

If the program has been configured for magnetic tape, the following commands are valid (press ENTER after each command):

- C            Continue -- puts DPDCP in the automatic mode, DPDCP will read the phone list file and collect data from the Slave station to the magnetic tape. When the last phone number has been dialed and the connection has been completed, the message "PHONE LIST COMPLETED" is displayed and you can enter another request.
  
- S or Sn      Skip -- causes the next or the next n numbers on the telephone list to be ignored.
  
- T            Terminate -- causes terminating filemarks to be written on the magnetic tape and the tape is rewound.

In addition to these commands, a telephone number can be entered to set up a connection with a Slave station.

While DPDCP is transmitting data, the screen will fill with messages. After each telephone number is dialed, that number is displayed under the NUMBER heading. The current status of that number is displayed under the STATUS heading (dialing, redialing, polling, receiving, completed, incomplected, or canceled). ERROR MESSAGES come from the list of error messages in Appendix A.

NUMBER	STATUS	ERROR MESSAGES	OTHER INFORMATION
690-7059	DIALING POLLING RECEIVING		APRIL1/TXT APRIL2/TXT 582 RECORDS
	COMPLETED		

DATAPOINT SCREEN

SAMPLE DPDCP MESSAGES

### Error Recovery

Errors which may occur in the reception of data fall into two classes -- those signaled by the Slave station and those detected by DPDCP.

There are a number of error conditions which the Slave station may detect. For instance, the Slave station may detect a parity error while attempting to read from a cassette, or the disk may go off-line (someone may push the load switch) while the Slave is attempting to read a file. These error conditions are indicated by a number in the ERROR MESSAGES column. These numbers are explained in Appendix A.

The error conditions detected by DPDCP concern the telephone connection. A timeout can occur if 30 consecutive seconds go by without a data message. This could denote either a very bad phone connection or a power failure at the Slave station. DPDCP attempts to re-establish communications up to the maximum number of configured times. If the maximum number of dial-up retries has been reached, DPDCP will Beep once every second until you press the ENTER Key to acknowledge the abnormal condition.

If the power should fail while DPDCP is in the midst of collecting data, you must rewind the magnetic tape or cassette (whichever is receiving the data) and begin again. Use the REWIND command to rewind the cassette or push the REWIND button to rewind the magnetic tape. If your data spans more than one volume, you must start over from the first volume.

### Terminating a Connection

To terminate the current connection and ignore all data received during the current connection, type "S" and press the DISPLAY Key until the message "OPERATOR DISCONTINUED" is displayed. The connection is then terminated and the magnetic tape is backspaced to the beginning of the current file, logically erasing that file. You will then be asked to respond to "REQUEST".

### Interrupt Request -- Manual Telephone Number Entry

To dial a telephone number other than the next sequential telephone number on the list, type "I" and press the DISPLAY Key until



the message "INTERRUPT REQUESTED" is displayed. After the current connection has been terminated, "REQUEST?" will be displayed. Type a telephone number and press ENTER. That number will then be dialed.

## SECTION 3

### The Data Distribution Master Programs (DPDDP and DPSDDP)

#### Introduction

DPDDP and DPSDDP are Master station transmitting programs for magnetic tape and cassette systems. DPDDP is for asynchronous systems and DPSDDP is for synchronous systems (see the Equipment Needed section of Chapter One). Though we'll use the asynchronous program name throughout this section, the synchronous program works in much the same way, except that you'll have to physically dial the telephone number to make a synchronous connection over standard telephone lines.

DPDDP will dial one or more Slave stations and transmit data to the Slave stations. DPDDP is almost identical to DPDCP, described earlier, so only the differences are described here.

DPDDP consists of three files on a stand-alone load-and-go cassette tape, model code number 20272. Put this cassette tape in the rear cassette deck. The three files are:

1. DPDDP itself.
2. The configuration record, which gives a description of your Datapoint system.
3. The telephone list file.

#### The Configuration Record

Because the DPDDP configuration record is almost identical to the DPDCP configuration record, only the differences are described here. See the Configuration Record description in the DPDCP section.

To modify the configuration record, put the DPDDP cassette in the rear cassette deck. Press RESTART and IMMEDIATELY hold down both the KEYBOARD and DISPLAY Keys until the record is loaded. (Press both RESTART and RUN if you're using a 5500). Each variable will appear, one at a time, on the screen. Press ENTER to accept a value, or type in a new value and press ENTER to change a value.

The values are presented in the following order:

1. Tape Transport Type -- like DPDCP
2. Magnetic Tape Label -- like DPDCP
3. Code Set -- like DPDCP
4. Blocking on Magnetic Tape

If the source of the transmitted data is the front cassette rather than magnetic tape, blocking information is ignored. The receiving cassette at the Slave station becomes an exact duplicate of the data cassette at the Master station.

Labeled tapes normally contain blocking information as a part of the tape label itself. When this is the case, configured magnetic tape blocking information is ignored. Valid blocking values are given in the DPDCP description.

5. Blocking on Cassette at the Slave Station

DPDDP controls the cassette blocking factor at the Slave station. The possible values are:

Value	Blocking Format
C	Compressed data format with space compression (preset value).
S	Single logical record per physical record with no space compression (maximum size is 249 characters per record).

6. Number of Retries on Dial-up -- like DPDCP.

7. Dial-Tone Wait Time -- like DPDCP.

8. Should Data Be Printed?

Data can be printed at the Slave station after it has been received. Any of the following values may be selected:

Value	Result
N	No printing (default)
Y	Print one line per logical record, 54 lines per page
C	Print using carriage control information in the first data character of each logical record. The first character of each record is never printed. Valid carriage control characters are:

Blank	Space one line before printing
O	Space two lines before printing
-	Space three lines before printing
+	Suppress spacing before printing (overprint)
1	Skip to top of form

9. Write to Cassette?

DPDDP lets you determine where you want the data to be written.

Value	Result
N	Data is transmitted only to the printer (you must respond to the above question with a Y or C)
F	Data is written to file O of the front cassette tape, possibly overwriting valid data there (Preset value).
R	Data is written to File 32 of the rear

cassette. (This means that the data will be appended to the Slave system cassette).

Last of all, you will be asked if the changes you are making are permanent ("Y") or not ("N"). Answer the "PERMANENT CHANGE?" question and your configuration record is all set.

### **The Telephone List File**

You create and modify the DPDDP telephone list file exactly as you create and modify the DPDCP telephone list file, so read that section.

### **Operating Procedures**

DPDDP operates just as DPDCP does, except that you put the DPDDP cassette instead of the DPDCP cassette in the rear cassette deck and the data is transmitted to the Slave station instead of received from the Slave station. So read the Operating Procedure, Error Recovery, Terminating a Connection, and Interrupt Request descriptions in Section 2.

## SECTION 4

### The Magnetic Tape Master Programs (DPMTM and DPSMTM)

#### Introduction

DPMTM and DPSMTM are the Master programs for magnetic tape systems with disk or diskettes. DPMTM is for asynchronous systems and DPSMTM is for synchronous systems. Though we'll use the asynchronous program name throughout this section, the synchronous program works in much the same way, except that you will have to physically dial the telephone number to make a synchronous connection over standard telephone lines.

DPMTM operates in two basic cycles: a receiving cycle in which data is collected from a Slave station and written to magnetic tape, and a transmitting cycle in which data is read from magnetic tape and transmitted to a Slave station. If you've never used Datapoint equipment, see the "Guide to Operating Datapoint Equipment".

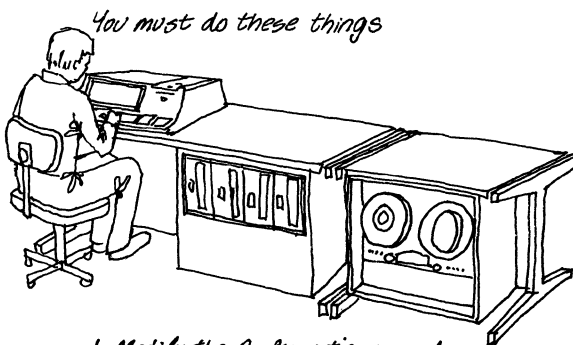
If you're using diskettes with magnetic tape, get a copy of Datapoint's DPMTM diskette. Put that diskette in Drive 0 (the drive on the left on all Diskette 1100 systems), and press RESTART.

If you're using a cartridge or mass storage disk system with magnetic tape, and you do not already have DPMTM on your disk, get a copy of Datapoint's DPMTM cassette, model code number 20273. Put your DOS Boot tape in the rear cassette deck and press RESTART (you must press both RESTART and RUN on a 5500). Put the DPMTM cassette in the front deck and when DOS responds with "READY", type "MIN;AO". This will copy all of the DPMTM files to your disk.

You now have these DPMTM files on your disk or diskette:

DPMTM/CMD  
DPMTM/OV1  
DPMTM/OV2

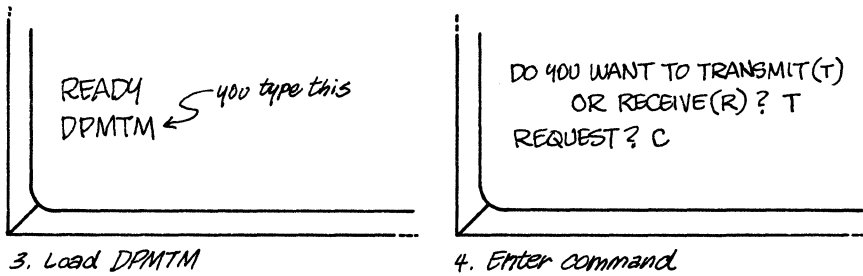
DPMTM/OV3  
DPMTM/OV4  
DPMTM/OV5



*1. Modify the Configuration record.*

690-7059  
312-849-1299  
\*

*2. Set up a telephone list file  
(optional)*



*DPMTM does the rest!*

### **Configuration Options**

Because DPMTM has two cycles, receiving and transmitting, DPMTM has two configuration records. Each configuration record tells DPMTM about the magnetic tape characteristics for that cycle.

To change these configuration records, press RESTART (or RESTART and RUN on a 5500). DOS will respond with "READY". Type "DPMTM", press and hold down both the KEYBOARD and DISPLAY Keys, press the ENTER key, and do not release KEYBOARD and DISPLAY until DPMTM responds with "CONFIGURATION SECTION FOR THE TRANSMITTING CYCLE".

The variables and their values for the transmitting cycle and the receiving cycle are displayed one at a time. To accept the current value, press the ENTER Key. To change the current value, type in the new value and press ENTER.

### **Configuration Options for the Transmitting Cycle**

The configuration options for the transmitting cycle are displayed in the following order:

#### 1. Tape Transport Type

The tape transport type defines the type of magnetic tape you are using. The possible tape transport configurations and values are:

Value	Transport
9N	9-track 800 BPI (default)
7N	7-track 556 or 800 BPI
9P	9-track 1600 BPI

#### 2. Magnetic Tape Labels

The possible labeling configurations and values are:

Value	Label Type
A	ANSI compatible (default)
I	IBM OS compatible
N	No labels

Data file names coming from a magnetic tape label are ignored. If the first logical record of a

magnetic tape file contains five asterisks and a valid telephone number, that number is the number to which that data file is transmitted. If the first logical record of a magnetic tape file does not contain five asterisks and a telephone number, that file is sent to the next available number on the telephone list.

### 3. Code Set

DPMTM can read magnetic tape that is written in any one of three character code sets. The possible character code set configurations and values are:

Value	Code Set
B	7-track BCD
A	9-track ASCII (default)
E	9-track EBCDIC

### 4. Blocking on Magnetic Tape

DPMTM is initially configured to read unblocked magnetic tape records. If labeled tapes contain blocking information in the tape label, configured magnetic tape blocking information is ignored.

For blocked files on unlabeled tapes or labeled tapes with no blocking information in the labels, you must enter the blocking information as two numbers, "n" and "m", in this manner:

$$nXm$$

where "n" is the number of characters per logical record and "m" is the number of logical records per physical record. The maximum value for "n" is 249 and the maximum value for "m" is 255. The maximum value for the product of "n" and "m" is 1057 for 7-track 550 and 800 BPI and 9-track 800 BPI tapes, and 2048 for 9-track 1600 BPI tapes.

The character "U" should be entered to indicate unblocked records. The maximum number of characters in an unblocked record is 249.

43511 GEORGETOWN ST. COLUMBUS MO.

2785 BLACKSTONE CHICAGO ILL.

411 FIRST ST. DALLAS TEX.

UNBLOCKED RECORDS ARE OF VARYING LENGTHS

4	3	5	1	1	G	E	O	R	G	E	T	O	W	N	S	T.	C	O	L	U	M	B	U	S	M	O.
2	7	8	5		B	L	A	C	K	S	T	O	N	E		C	H	I	C	A	G	O		I	L	
4	1	1			F	I	R	S	T	S	T.	D	A	L	L	A	S		T	E	X.					

*these blanks will be stuffed in for you*

BLOCKED RECORDS CONSIST OF LOGICAL RECORDS THAT ARE ALL THE SAME SIZE

5. Blocking at the Slave Station

Possible configurations and values for blocking the data that is sent to the Slave station are:

Value	Blocking Format
C	Datapoint's standard compressed data format (default)
S	No space compression

6. Number of Retries on Dialup

DPMTM is initially configured to attempt communication with a particular number on its phone list five times. If communication is not established within five attempts, DPMTM will wait for you to acknowledge the problem by signalling with Beeps until you press the ENTER Key. You can change this value to any number from 1 to 9.

7. Time for Dial-Tone Wait

DPMTM is initially configured to wait for five seconds each time an asterisk is encountered in a dialed telephone number. This value can be set to any two-digit number from 01 to 99.

8. Should Data be Printed?

Possible values are:

Value	Action
N	No printing (default)
Y	Print one line per logical record, 54 lines per page.
C	Print using the first character of each logical record as a carriage control character. Valid carriage control characters are:
Blank	Space one line before printing
O	Space two lines before printing
-	Space three lines before printing
+	Suppress spacing before



printing (overprint the line)  
Skip to top of form

1

9. Write to Cassette?

Possible values are:

Value	Action
N	Data is to be transmitted only to the printer
F	If the Slave system is a cassette system, data is written to file O of the front cassette tape. If the Slave system is a disk system, file RUNIT2/TXT is used to obtain the list of file names for the disk files that are received at the Slave.
R	If the Slave system is a cassette system, data is to be written to file 32 on the rear cassette tape (the Slave station system tape). If the Slave system is a disk system, file RUNIT1/TXT is used to obtain the list of file names for the disk files that are received at the Slave.

10. Permanent Change?

If the configuration values for the transmitting cycle are to be used on this and all future sessions, respond with "Y". A response of "N" will cause DPMTM to use these values only during the current session.

**Configuration Options for the Receiving Cycle**

The configuration options for the receiving cycle are displayed in the following order:

1. Tape Transport type -- same as for transmitting cycle
2. Magnetic Tape labels -- same as for transmitting cycle
3. Initial Magnetic Tape Volume Serial Number  
DPMTM is configured to write a volume serial number of 000001 on the first magnetic tape of the data set. If the data set spans more than one volume, this number is incremented by one for each additional volume. If you want to start numbering with another number, type in the 6 digits you prefer to use.
4. Code Set -- same as for transmitting cycle

5. Blocking on Magnetic Tape  
 DPMTM is initially configured to write unblocked magnetic tape records. See the transmitting cycle description on how to indicate that you want to write blocked records.
6. Accept Incomplete Files?  
 DPMTM is initially configured not to accept incomplete file transmissions ("N"). Type "Y" to accept files that are incomplete for some reason, such as a noisy line, terminated connection, or parity error.
7. Number of Retries on Dial-up -- same as for transmitting cycle.
8. Time for Dial-Tone Wait -- same as for transmitting cycle.
9. Permanent Change? -- same as for transmitting cycle.

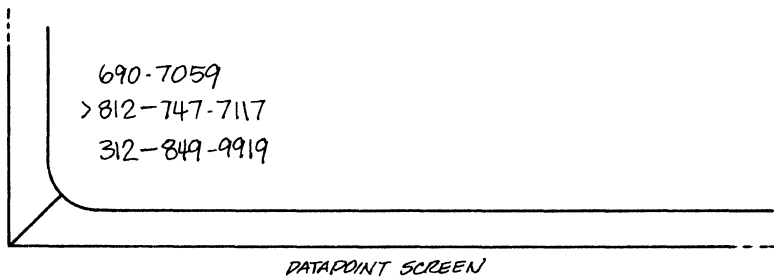
### **Telephone Numbers**

Before DPMTM can establish communications with a Slave station, it must obtain the telephone number of that Slave station. The telephone numbers can come from three sources:

1. A disk file containing a list of telephone numbers, one per line. You can create this file using the EDIT program. Type "EDIT name" (name is the name you choose for the file) and press ENTER. Later, when you run DPMTM, you tell it what names you picked for this file. The screen will clear and you can type one phone number per line, ending each line with a press of the ENTER Key. If you make mistakes, you can use the BACKSPACE Key to cancel each character or the CANCEL Key to start the line over.

Notice the arrowhead in the first column of the display screen. You can use the DISPLAY and KEYBOARD keys to move this pointer to point to a line that you've already entered, that needs to be corrected. You can use any of the standard EDIT commands, including:

:D	Delete pointed line and type in new number.
:I	Insert new line after that line.



### DISK FILE CONTAINING TELEPHONE NUMBERS

2. During actual DPMTM operation, you can type it in.
3. If the first logical record in a file on magnetic tape contains five asterisks and a telephone number, that phone number will be used (transmission cycle only).

Telephone numbers can consist of up to 16 digits, optionally separated by asterisks (to denote a wait for a dial-tone) or dashes (to promote easy readability). Here are some valid telephone numbers:

7059	A PBX or Centrex extension
690-7059	A local number from a private line
9*690-7059	A local number from a Centrex extension
1*690-7059	A long distance number in the same area code from a private line
9*1*690-7059	A long distance number in the same area code from a Centrex extension
1*512-690-7059	A long. distance number in another area code from a private line
9*1*512-690-7059	A long distance number in another area code from a Centrex extension

### Operating Procedures

To operate DPMTM, type "DPMTM" and press the ENTER Key. If you've just changed the configuration record, DPMTM will automatically be loaded for you. DPMTM first asks "DO YOU WANT TO TRANSMIT(T) OR RECEIVE(R)?" Respond with "T" for transmit, "R" for receive, or "\*" to get out of DPMTM and return to DOS. Press ENTER after you type in your response.

DPMTM then asks "REQUEST". Enter one of these commands, then press ENTER:

- C Continue. Puts DPMTM in automatic mode. DPMTM looks in the currently open telephone list file and continues with the next phone number. This is useful when dealing with multi-volume tapes and the end of volume has been reached but the telephone list is not completed. You can mount the next tape volume after the

message "END OF VOLUME" is displayed and type "C" to continue with the current telephone list. To start using (open) a telephone list file, type "C filename" where filename is the name of the telephone number file.

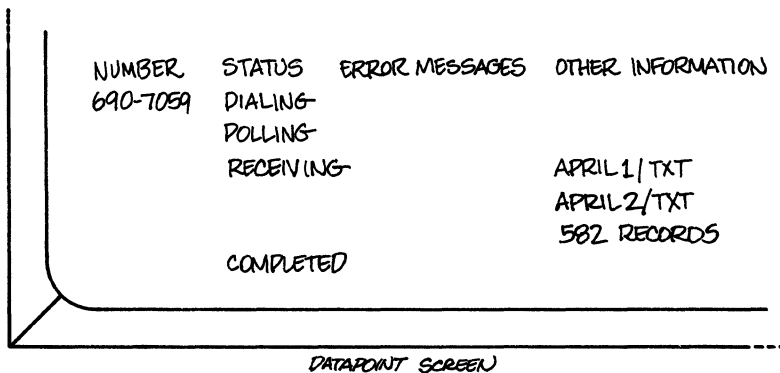
The message "BAD FILE SPEC GIVEN" is displayed if DPMTM can't find the file. The message "BAD PHONE NUMBER" is displayed if the file does not contain a valid telephone number.

- Sn Skip. The next "n" numbers on the telephone number are ignored.
- Rn Reset. The next "n" files on magnetic tape are ignored.
- T Terminate processing for the current cycle. The magnetic tape is rewound and you are asked to select a cycle again.

telephone number A telephone number can be entered in the proper format. That number is dialed. If in the transmitting cycle, the next file on the magnetic tape is transmitted to the Slave. If in the receiving cycle, any data received is written to the magnetic tape.

### Display Messages

While DPMTM is transmitting or receiving data, the screen will fill with messages. After each telephone number is dialed, the number is displayed under the NUMBER heading. The current status of that number is displayed under the STATUS heading (dialing, redialing, polling, transmitting, receiving, completed, incompleted, or cancelled). ERROR MESSAGES come from the list of error messages in Appendix A.



SAMPLE DPMTM MESSAGES

## **Error Recovery**

Errors fall into two classes -- those signalled by the Slave station and those detected by DPMTM. The errors which are signalled by the Slave station are listed in Appendix A.

The errors detected by DPMTM concern the telephone connection. A timeout can occur if 30 consecutive seconds go by and DPMTM has not received a valid message. DPMTM will try to re-establish communications up to the maximum number of configured times. If the maximum number of dial-up retries has been reached, DPMTM will Beep once every second until you press the ENTER Key to acknowledge the error condition.

If the power fails while DPMTM is transmitting or receiving data, you must rewind the magnetic tape (press the REWIND switch) and manually begin transmission again after the last transmission using the Skip and Reset commands.

## **Interrupting the Communications**

There are two special commands which you can use after a data transfer operation has begun.

To interrupt the normal automatic operation and insert a telephone number manually after the present connection is completed, press DISPLAY and I at the same time. The message "INTERRUPT REQUESTED" is displayed. After the current connection has been completed, the message "REQUEST" is displayed and you can enter a telephone number.

To interrupt transmission and terminate the present phone connection, press DISPLAY and S at the same time. The magnetic tape is spaced forward to the beginning of the next file. When the message "REQUEST" is displayed, enter another command or telephone number.

## SECTION 5

### The Slave Programs for Disk (DPDSP and DPSDSP)

#### **Introduction**

DPDSP and DPSDSP are Slave station programs for disk and diskette systems. DPDSP is for asynchronous systems and DPSDSP is for synchronous systems (see the Equipment Needed section of Chapter One). Though we'll use the asynchronous program name throughout this section, the synchronous program works in much the same way.

DPDSP functions as an unattended automatic Slave station to any of the DATAPOLL Master programs. Whether it is communicating with a Master program equipped with cassettes, magnetic tape, or disk, file compatibility is maintained. For example, a magnetic tape created on an IBM system can be transmitted to DPDSP and the data received will be written to disk or diskette in a format which is compatible with other standard Datapoint software.

#### **If You've Got a Diskette System.....**

Get a copy of Datapoint's readymade DPDSP diskette, model code number 20282. Turn your diskette system ON, put the DPDSP diskette in Drive 0 (the drive closest to you on all Diskette 1100 systems) and press RESTART. Check the "Guide to Operating Datapoint Equipment" if you're not acquainted with the Datapoint equipment. The DOS.C message and "READY" will appear on the display screen.

#### **If You've Got a Cartridge or Mass Storage Disk System....**

Turn your disk system ON, put your DOS boot tape in the rear cassette deck, and press the RESTART Key (on a 5500 you must press the RESTART and RUN Keys simultaneously). DOS will respond with "READY".

If you don't already have DPDSP on your disk, get a copy of the DPDSP cassette tape, model code number 20281. Put this cassette in the front cassette deck and type "MIN ;AO" and press ENTER. This will put a copy of DPDSP on your disk.

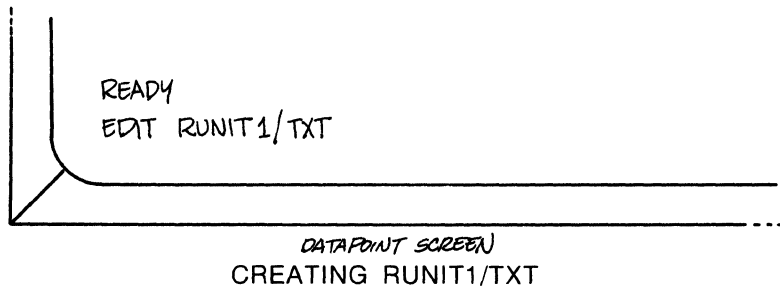
#### **Setting Up the Control Files**

Master station commands tell DPDSP to transmit from or receive to UNIT1 or UNIT2. UNIT1 and UNIT2 stand for control files on a disk that contain a list of file names that DPDSP is to use when it is told to transmit or receive data.

In a disk system, UNIT1 refers to a file named TUNIT1/TXT (for transmitting) or RUNIT1/TXT (for receiving). UNIT2 refers to a file named TUNIT2/TXT (for transmitting) or RUNIT2/TXT (for receiving). So if DPDSP is told to transmit UNIT1, it checks file TUNIT1/TXT to obtain the list of file names that are to be transmitted. If DPDSP is told to receive UNIT2, it checks file RUNIT2/TXT for a list of file names into which data should be written.

You'll have to use the Editor to create the control files, or you can use DPDMP to set them up for you (see the DPDMP description) We'll use an example to show how easy it is. In this example, we'll

create file RUNIT1/TXT. First type "EDIT RUNIT1/TXT" and press ENTER.

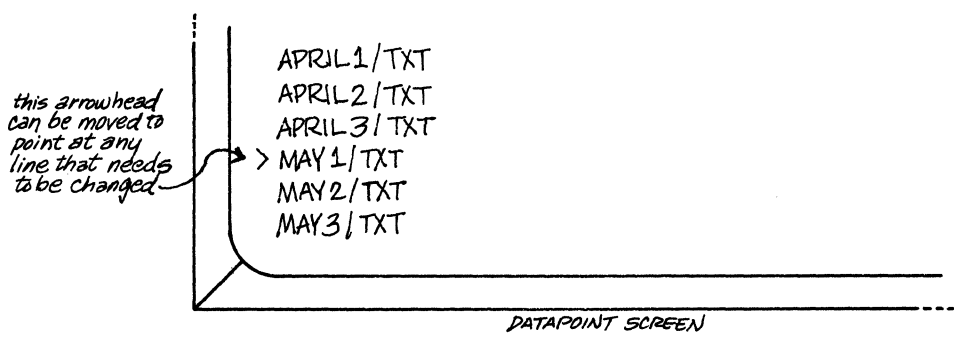


The screen will clear and there will be an arrowhead pointing at one of the blank lines. If this file already exists, you can examine its contents by simultaneously pressing both the KEYBOARD and DISPLAY Keys.

To enter new lines of text, just type them in, pressing ENTER after each line. While in the line, you can use the BACKSPACE Key to correct errors and the CANCEL Key to start the line over. If you've completed the line, you can use any EDIT commands to correct your mistakes.

The arrowhead must point to the line you want changed. Press the DISPLAY Key to move the arrowhead down or the KEYBOARD Key to move the arrowhead up. Then type in your EDIT command. Two very useful EDIT commands are:

- :D Delete line and start inserting text again on that line.
- :I Insert a line after the line that is pointed at.



SAMPLE FILENAME LIST FILE

**Operating DPDSP**

Now that the control files are set up, all you need to do is type "DPDSP" and press ENTER. DPDSP will wait for the Master station to establish communications and it will do all the work involved in transferring or receiving data. You can leave your Datapoint computer alone until it is done; it will not need to ask you anything and will take care of itself.

DPDSP displays status messages that are similar to those that are displayed at the Master station while the program is running.

## **SECTION 6**

### **The Slave Programs for Cassettes (DPASP and DPSASP)**

#### **Introduction**

DPASP and DPSASP are Slave station programs for cassette systems. DPASP is for asynchronous systems and DPSASP is for synchronous systems (see the Equipment Needed section of Chapter One). Though we'll use the asynchronous program name throughout this section, the synchronous program works in much the same way.

DPASP functions as an unattended automatic Slave station to any of the DATAPOLL Master programs. Whether it is communicating with a Master program equipped with cassettes, magnetic tape, or disk, file compatibility is maintained. For example, DPASP can transmit a cassette file to a Master station, which will put IBM OS labels on the magnetic tape that will record the data. This data then can be used on an IBM system.

#### **Operating Procedures**

DPASP is released on a load-and-go cassette tape, model code number 20270. Put this cassette in the rear cassette deck. If the Master program will be transmitting to the front cassette, put a blank cassette in the front deck. If the Master program will be receiving from the front cassette, put the necessary data cassette in the front deck. If the Master program will transmit to the rear deck, the file will be added to the DPASP system cassette tape.

Press the RESTART Key (or RESTART and RUN on a 5500). DPASP will automatically do several things:

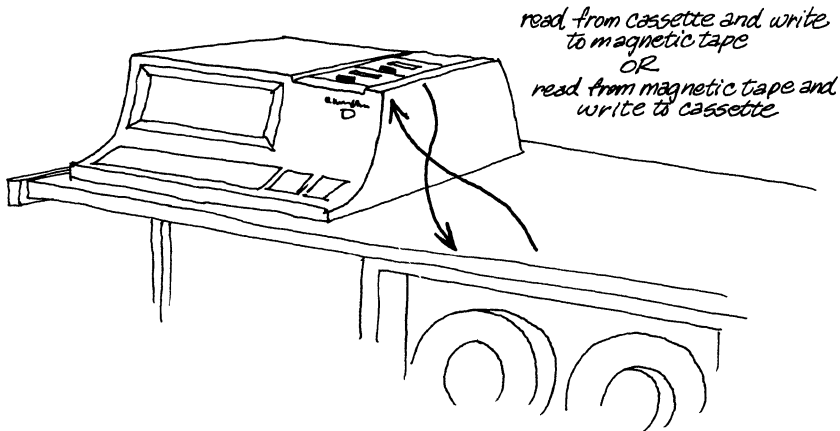
1. Terminate any previously established connection
2. Determine the type of printer that is connected to the system. If there is no printer, DPASP displays "PRINTER MODULE NOT FOUND. PRINT MODULE DISABLED" on the screen.
3. The front cassette is rewound and the rear cassette is positioned immediately after the DPASP program file.
4. DPASP displays the same status messages that are displayed at the Master station during program execution.



## SECTION 7 The DPMSP Utility

### Introduction

DPMSP is a utility package for a Datapoint 2200 or 5500 with magnetic tape. DPMSP operates in two modes. One mode reads from cassettes and writes to magnetic tape. The second mode reads from magnetic tape and writes to cassettes.



### DPMSP FACILITIES

Because DPMSP does not use or require any communications equipment, DPMSP can be used with Datapoint 2200 and 5500 processors that are equipped to communicate synchronously or asynchronously.

DPMSP, like all DATAPOLL packages, is very easy to use. This is how you use DPMSP:

1. Specify the configuration. Tell DPMSP about the type of magnetic tape or cassette you will write to.
2. Run DPMSP and specify which module you want to use.

DPMSP does all the rest.

### Specify the Configuration

Put the DPMSP system cassette, model code number 20274 in the rear cassette deck. You must immediately depress both the **KEYBOARD** and **DISPLAY** Keys after pressing **RESTART** (or **RESTART** and **RUN** on a 5500) until the configuration record is loaded. DPMSP displays each configuration variable and value, one at a time, on the display screen.

To accept the value displayed on the screen, press the **ENTER** Key. To change the value displayed on the screen, type in the new value and press the **ENTER** Key.

The variables and values are displayed in the following order:

1. Tape Transport Type

DPMSF is initially configured for a 9-track 800 BPI magnetic tape drive. The possible magnetic tape transport configurations and values are:

Value	Transport
9N	9-Track 800 BPI
7N	7-Track 556 or 800 BPI
9P	9-Track 1600 BPI

2. Magnetic Tape Labels

DPMSF is initially configured to read and write industry compatible ANSI magnetic tape labeled files. The possible labeling configurations and values are:

Value	Label Type
A	ANSI Compatible
I	IBM OS Compatible
N	No Labels

3. Initial Magnetic Tape Volume Serial Number

DPMSF is initially configured to write a volume serial number of 000001 on the magnetic tape if it is writing to magnetic tape. If you have data that spans several magnetic tape reels and don't want to start writing on the reel that will be considered the first volume, specify the 6-digit volume serial number you want to use.

4. Code Set

DPMSF is initially configured to read and write characters in the ASCII character code set. The possible code sets and values are:

Value	Code Set
B	BCD (required for 7-track tapes)
A	ASCII (for 9-track tapes)
E	EBCDIC (for 9-track tapes)

5. Blocking on Magnetic Tape

DPMSF is initially configured to write unblocked records on magnetic tape. Unblocked records are variable in length, containing a maximum of 249 bytes (one character is one byte). Each record can be a different length. If a record should contain more than 249 characters, it must be split in two or you will lose the excess characters.

When you block records, you can put more than one record into a block. Each record must be a certain length, so it is padded with blanks or truncated (cut off) to meet that length. Each record

is called a logical record and each block is called a physical record.

The possible blocking configurations and their values are:

Value	Blocking
U	Unblocked (maximum 249 characters)
nXm	Blocked - where n=number of characters per logical record (maximum of 249) and m=number of logical records per physical record (maximum of 255)

**NOTE:** When using blocked records, the maximum product of n and m is 1057 characters if you're using a 7-track or 9-track 556 or 800 BPI tape drive, and 2048 characters if you're using a 9-track 1600 BPI tape drive.

#### 6. Blocking on Cassette

DPMSP is initially configured to write cassettes in Datapoint's standard format with space compression. Possible blocking configurations and values are:

Value	Blocking
S	Datapoint's standard format with space compression.
G	Datapoint's standard format; no space compression.
O	One physical record per logical record; no space compression.

#### 7. Number of Cassettes per Magnetic Tape File

DPMSP is initially configured to write one magnetic tape file for each cassette. The possible values are:

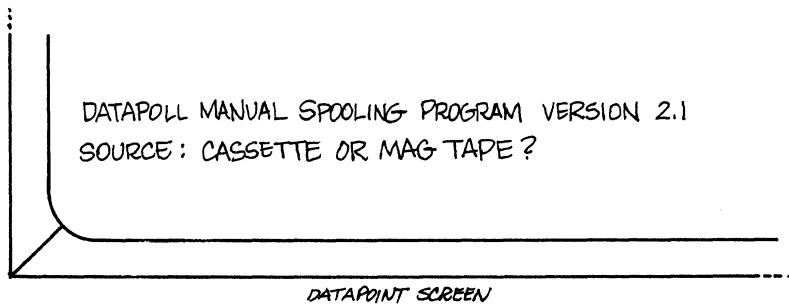
Value	Number
O	One cassette per magnetic tape file.
A	All cassettes in one magnetic tape file.

Once you have specified your configuration values, you will be asked if you want the configuration record permanently changed (type "Y") or if you want to change the record for the current execution only (type "N").

### Operating DPMSP

Put the DPMSP cassette in the rear cassette deck and press

RESTART (or RESTART and RUN on a 5500). The following messages will be displayed:



```
DATAPOLL MANUAL SPOOLING PROGRAM VERSION 2.1
SOURCE: CASSETTE OR MAG TAPE ?
```

DATAPoint SCREEN

### DPMSP INITIAL MESSAGES

If you type "C" (for cassette), DPMSP will read from cassette and write to magnetic tape. To remind you that you should use a blank magnetic tape, or a tape you want to write over, DPMSP asks "MAGNETIC TAPE SCRATCH?" and Beeps until you type "Y" and press ENTER. Then DPMSP writes the data from cassette to magnetic tape according to the description given in the configuration record.

If you type "M" (for magnetic tape), DPMSP will read from magnetic tape and write to cassette. To remind you that you should use a blank cassette, or one you want to write over, DPMSP asks "CASSETTE SCRATCH?" and Beeps until you type "Y" and press ENTER. Then DPMSP writes the data from magnetic tape to cassette according to the description given in the configuration record.

### **Naming Data Files on Magnetic Tape**

The first data files written to a labeled magnetic tape are always named "FILE0001TXT". Successive file names are created by incrementing the numeric portion of this file name by one ("FILE0002TXT", "FILE0003TXT",...).

The names of data files which are read from a labeled tape are ignored when the file is written to cassette.

### **Writing to Cassette**

DPMSP writes each file on the magnetic tape as the first file on a cassette. If the data in a magnetic tape file overflows a single cassette, terminating filemarks are written, a message indicating cassette overflow is displayed, and another cassette is requested to continue the file.

## **APPENDIX A**

### **Device Error Messages**

Device errors cause communications to fail between the Master station and the Slave station. During execution, the message "DEVICE ERROR XX" (where XX is a number between 01 and 99) is displayed on the Datapoint screen if an error condition is detected. Consult your local systems engineer if you are having problems.

The following errors can occur:

- 01 - Cassette not in place at the Slave station. The Master station has told the Slave station to either transmit data from a cassette or receive data to a cassette and the Slave station has rejected the command because a cassette was not mounted in the appropriate cassette deck.
- 02 - Cassette file not found at the Slave station. The Master station has told the Slave station to transmit a cassette file. When the Slave station received the command, it found a cassette in place but could not find the data file.
- 03 - Cassette parity error. A parity error persisted after the transmitting station attempted to read a record from the cassette five times.
- 04 - End of tape was detected while receiving to a cassette.
- 05 - Premature "deck ready" was detected while receiving to a cassette.
- 06 - Invalid cassette tape format.
- 11 - The printer went off-line while the Slave station was attempting to print data.
- 12 - The Slave station received a command which told it to print data but no print modules had previously been loaded. When the program at the Slave station is first loaded, it checks for a servo printer and a local printer. If a servo or local printer is found, the appropriate print module is loaded. If there is no printer or the printer is not powered up, turned on and selected, then no print modules will be loaded and the Slave station will reject all commands which require a printer.
- 13 - The Slave station received a command to print data but the printer was off-line.

- 14 - The Slave station received a resume printing command but the previous command was not a receive to the printer command or the printer is off-line.
- 15 - The Slave station was told to prepare to receive, but RUNIT1 or RUNIT2 was not found. Before the disk Slave station can receive data, a control file called RUNIT1 or RUNIT2 must be created. This file must contain a list of the file names where the received data will be written.
- 20 - While attempting to open a file, a "SPACE" trap occurred.
- 21 - The Slave station was told to transmit UNIT1 or UNIT2 from disk but TUNIT1/TXT or TUNIT2/TXT was not found.
- 22 - An invalid device type was specified in RUNIT1/TXT, RUNIT2/TXT, or TUNIT2/TXT.
- 23 - A "RANGE" trap occurred while opening the next file name contained in RUNIT1/TXT, RUNIT2/TXT, TUNIT1/TXT, or TUNIT2/TXT.
- 24 - A "RPARIT" trap occurred while opening the next file name contained in RUNIT1/TXT, RUNIT2/TXT, TUNIT1/TXT, or TUNIT2/TXT.
- 25 - A "FORMAT" trap occurred while opening the next file name contained in RUNIT1/TXT, RUNIT2/TXT, TUNIT1/TXT, or TUNIT2/TXT.
- 26 - An "OFFLINE" trap occurred while opening the next file name contained in RUNIT1/TXT, RUNIT2/TXT, TUNIT1/TXT, or TUNIT2/TXT.
- 27 - A command was received to transmit or receive more files but no more file names were found.
- 28 - A disk object file contained a non-object record.
- 29 - A "RPARIT" trap occurred while transmitting from disk.
- 30 - An "OFFLINE" trap occurred while transmitting from disk.
- 31 - A non-object record was found while receiving an object file to disk.
- 32 - A write protection violation occurred while receiving to disk.
- 33 - While receiving to disk, a write parity error persisted after five retries.

- 34 - The disk went off-line while receiving to disk.
- 35 - A "RANGE" trap occurred while receiving to disk.
- 36 - A "SPACE" trap occurred while writing a record to disk.
- 37 - An end-of-file was not written on the last file received to disk. This can occur only when receiving to disk and a "SPACE" trap occurs. When the "SPACE" trap occurs, the program backspaces over the last record and attempts to write an end-of-file. While attempting to write the end-of-file, one of the following errors caused the program to abort; "RPARIT" trap, "FORMAT" trap, "OFFLINE" trap, or "RANGE" trap.
- 39 - A file name contained in TUNIT1/TXT or TUNIT2/TXT was not found.
- 40 - The Slave station received a resume transmitting command but it was in a mode other than transmit.
- 41 - The Slave station received a resume receiving command but it was in a mode other than receive.
- 42 - Transmission was aborted because of a device error at the transmitting station.
- 43 - Polling failed because of a device error at the Slave station.
- 44 - Transmission aborted because of a device error at the receiving station.
- 45 - The Slave station has been dialed the maximum number of times and communications have not been established. This could be caused by power failure, Slave station is not loaded with a Slave program, etc.
- 49 - Buffer status word contains an invalid value. This could be caused by program failure or memory failure.
- 50 - Foreground status word contains an invalid value. This could be caused by program failure or memory failure.

**NOTE:** This list of error messages may not be complete. Check the Systems Guide for an up-to-date list of error messages.

## **APPENDIX B**

### **The Bell Telephone System DAA**

Asynchronous communications systems use standard telephone equipment to transfer data from one station to another. A Direct Access Arrangement (DAA) serves as an interface between the Datapoint Processor with its 9402 Asynchronous Communications Adaptor/Modem and the Bell Telephone System's telephone lines, insuring that all line requirements are met for the telephone equipment.

You should order a 1001D DAA. If you do not get a Bell DAA, make sure that your DAA is a 1001D compatible DAA.

The DAA can be ordered with several options. You may want to specify several options depending on your system's configuration. Datapoint suggests these options:

1. A handset (telephone so you can also use the line for voice transmitting or receiving data).
2. Ask the telephone company to install it such that the coupler controls the line. The ringer is connected on the line side of the exclusion key. Both coupler and telephone ring.
3. The Datapoint communications adaptor supplies the power for the DAA. Don't order the optional Bell DAA Power Supply.



**APPENDIX C**  
**Available DATAPOLL Packages and User's Guides**

PACKAGES		U.G.	LGO	OBJ (tape)	OBJ (diskette)
DPASP 2.1	DP Auto Spool Program	50189	20270		
DPDCP 2.1	DP Data Collection Program	50190	20271		
DPDDP 2.1	DP Data Dist Program	50191	20272		
DPDMP 2.1	DP Disk Master	50192		20279	20280
DPMTM 1.1	DP Magnetic Tape Program	50193	20273		
DPDSP 2.1	DP Disk Spool Program	50194		20281	20282
DPMSP 2.1	DP Manual Spooling Program	50195	20274		
DATAPOLL Asynchronous Systems Guide		50196			
DPSASP 1.1	DP Synchronous Auto	50197	20275		
DPSDCP 1.1	DP Synchronous Data Coll	50198	20276		
DPSDDP 1.1	DP Synchronous Data Dist	50199	20277		
DPSDMP 1.1	DP Synchronous Disk Master	50200		20283	20284
DPSMTM 1.1	DP Sync. Mag. Tape Master	50201	20278		
DPSDSP 1.1	DP Sync. Disk Spool	50202		20285	20286
DATAPOLL Synchronous Systems Guide		50203			
DATAPOLL Simplified User's Guide		50204			

U.G. - USER'S GUIDE  
LGO - LOAD-AND-GO TAPE  
OBJ - OBJECT TAPE or DISKETTE

## NOTES

# DATAPOINT CORPORATION



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