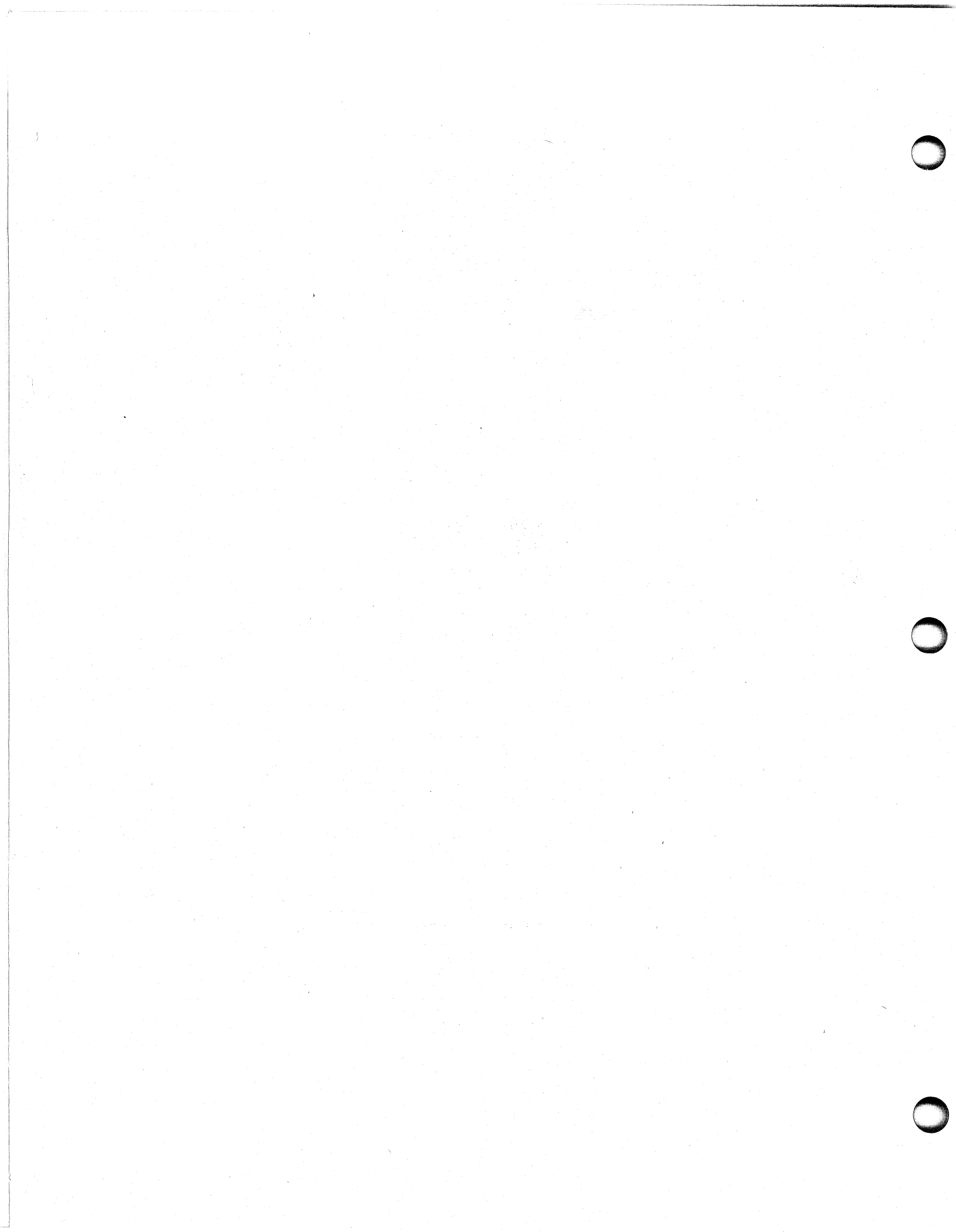


Generating, Running,
and Using
DG/GATETM Software



GENERATING, RUNNING, AND USING DG/GATE™ SOFTWARE

**Data General's
General Asynchronous Terminal Emulator**

093-000353-2.35

For the latest enhancements, cautions, documentation changes, and other information on this product, please see the Release Notice supplied with the software.

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Generating, Running, and Using DG/GATE™ Software

093-000353-2.35

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DG/GATE Rev. 2.35
AOS Rev. 4.68
AOS/VS Rev. 4.04
AOS/WS Rev. 5.02
RDOS Rev. 7.40
DGRDOS Rev. 1.09

TABLE OF CONTENTS

	Page

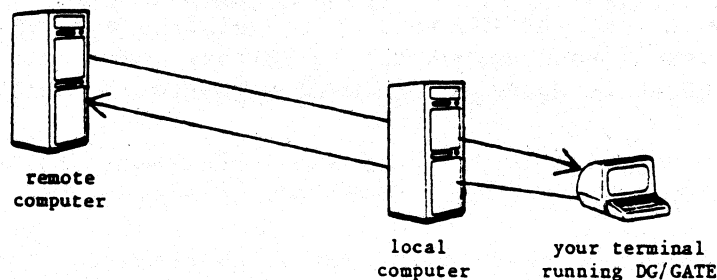
HOW TO USE THIS MANUAL.....	i
ASYNCHRONOUS DATA COMMUNICATIONS OVERVIEW.....	ii
INTRODUCTION TO DG/GATE.....	iv
Purpose of Product.....	v
Major Features.....	vi
ONE -- INSTALLATION GUIDE	
1 Prerequisites.....	3
2 Planning.....	6
3 Hardware Configurations and Cabling.....	9
Using AOS/WS or DGRDOS.....	10
Using AOS, AOS/VS, or RDOS.....	15
4 Preparing Your Operating System.....	20
AOS/WS Installation.....	21
DGRDOS Installation.....	23
AOS Installation.....	25
AOS/VS Installation.....	27
RDOS Installation.....	29
TWO -- USER'S GUIDE	
1 General Operating Instructions.....	35
2 How to Execute DG/GATE.....	36
Using Switches.....	36
3 Main Menu.....	38
Maintain Phone Directory.....	39
Begin or Resume Remote Communications.....	46
End Remote Communications.....	48
Enable Communications Logging.....	49
Disable Communications Logging.....	51
Transfer a File.....	52
Use Local CLI.....	59
DG/GATE Information Menu.....	60
Exit From DG/GATE.....	61
Tips and Techniques.....	63

INTRODUCTION TO DG/GATE

DG/GATE provides your ECLIPSE computer system with a low-cost asynchronous "gateway" to remote computer systems. DG/GATE software permits users to sign on at a remote system and function as an asynchronous terminal.

With DG/GATE software, your computer can share information with many other properly equipped systems. DG/GATE makes it possible to use up-to-date information in centralized databases and to use the processing power and expensive peripherals of other computer systems.

When running DG/GATE, your system appears to the remote system as an asynchronous terminal just like any other terminal connected to that system. DG/GATE serves as a "pass through" function so that information you enter at your console passes through your local computer to DG/GATE. DG/GATE then sends the information to the remote computer as though no local computer exists. DG/GATE also can emulate LEXIS/NEXIS* or TTY terminals.



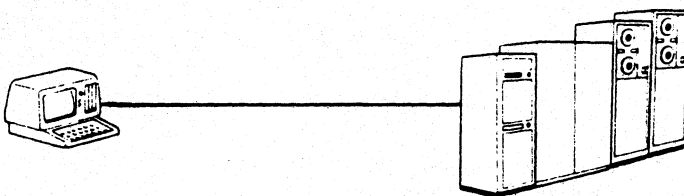
Data passes through your local computer without being processed. The remote computer does all the processing.

*LEXIS and NEXIS are registered trademarks of Mead Data Central and are services of Mead Data Central

PURPOSE OF THE PRODUCT

DG/GATE was developed to enhance the capabilities of the Data General ECLIPSE computers, especially those of the Desktop Generation models. In addition to using the Desktop models as stand-alone computers, many users need to use the Desktop to interface with a remote computer.

DG/GATE enables you to use the resources of a remote computer, as well as send or receive files, and to connect with information retrieval services.



Use your ECLIPSE
computer by itself

or

Access the resources
of a remote computer

MAJOR FEATURES

- . Communicates interactively with any other Data General systems using low-cost asynchronous modems or the appropriate direct connection
- . Allows access to remote non-Data General systems such as Dow-Jones News/Retrieval*, functioning as a simple teletype
- . Can function as an asynchronous LEXIS/NEXIS terminal
- . Provides a low-cost alternative to networking for sharing peripherals and processing power of other systems
- . Supports binary file transfer between your system and remote Data General systems that have the asynchronous file transfer slave
- . Supports text file transfer between your system and remote non-Data General systems
- . Supports communications logging
- . Provides a "local echo" option which allows the terminal to display characters on the screen instead of requiring the remote CPU to transmit the characters you type to the screen
- . Supports the HAYES** SMARTMODEM, which incorporates an auto call unit within the modem box
- . If your terminal supports ANSI 3.64, DG/GATE supports ANSI 3.64

*Dow Jones News/Retrieval is a registered trademark of Dow Jones & Company, Inc.

**HAYES is a U.S. registered trademark of Hayes Microcomputer Products

ONE

Installation Guide



1 -- INSTALLATION PREREQUISITES

Below is a chart of equipment and software you need to use DG/GATE. The chart is followed by a short explanation of each prerequisite.

Chart of Prerequisites

	AOS Rev. 4.68*	AOS/VS Rev. 4.04*	AOS/WS** Rev. 5.02*	RDOS Rev. 7.40*	DGRDOS** Rev. 1.09*
ECLIPSE computer	X	X	X	X	X
Data General terminal	X	X	X	X	X
Connection to remote CPU	X	X	X	X	X
Disk storage	X	X	X	X	X
38kb computer memory for DG/GATE				X	X
64kb computer memory for DG/GATE	X	X	X		
At least one communications line	X	X	X***	X	X***

* (or later)

** AOS/WS and DGRDOS are used with the Desktop computers

*** (a USAM)

The CPU

You must use one of the ECLIPSE computers. The ECLIPSE line of computers includes the

- . ECLIPSE or microECLIPSE
- . MV/Family ECLIPSE
- . the Desktop Generation

The Operating System

An AOS, AOS/VS, AOS/WS, RDOS, or DGRDOS operating system is required.

The 16-bit ECLIPSE computers support AOS or RDOS.

The MV (32-bit) ECLIPSE computers support AOS/VS.

Desktop computers support AOS/WS or DGRDOS.

If you are using Rev. 1.09 of DGRDOS you must patch the operating system to ensure that DG/GATE executes properly. See the DGRDOS Rev. 1.09 Release Notice for patch information.

The DG Terminal

Any DG D200 (or above) terminal with 15 function keys is preferred. DG 6053 terminals are acceptable; however, because the 6053 has only 11 function keys, you must re-define any function keys above 11. Also, the 6053 does not support LEXIS/NEXIS terminal emulation.

The Connection

You may use a direct connection or a connection through a modem. The type of connection you select depends upon the communications hardware present on the remote system with which you wish to communicate. You may use the

- . indirect modem connection
- . direct RS232-C connection
- . direct RS422-A connection
- . direct current loop connection

The connection you use determines cabling requirements.

Disk Storage

Any permissible type of disk storage for your particular computer system is acceptable.

Computer Memory

DG/GATE requires 38kb of user program memory under RDOS or DGRDOS. Under AOS, AOS/VS, or AOS/WS, DG/GATE requires 64kb of user program memory.

Communications Lines

The communication line type varies depending upon the communication device you have.

Desktop computers are equipped with a USAM (Universal Synchronous Asynchronous Multiplexor) communication device.

Any kind of multiplexor supported by the operating system will work with DG/GATE. If you are using a USAM or ASLM multiplexor under an AOS or AOS/WS operating system, you can improve performance by allowing DG/GATE to define the multiplexor.

Knowing what kind of communication device you have is important when generating the communication line (outlined later in this section of the manual). However, if you are unsure of the device type, you may take a default value.

2 -- PLANNING

Prior to installing DG/GATE, you must determine the following:

- . the connection between the local and remote systems
- . the remote system configuration

Choosing the Connection

You may connect your local computer system to a remote computer system by one of four methods. These methods are:

- 1) Indirect, through modems
- 2) Direct, through an RS232-C system-to-system link
- 3) Direct, through an RS422-A system-to-system link
- 4) Direct, through a current loop system-to-system link

Your choice of direct connection method is determined by the communications hardware present on the remote system.

Cabling should agree on both ends of the communication. For instance, if you install a current loop connection on the local computer, a current loop connection should be installed on the remote computer as well.

In the case of long-distance communications, the indirect (modem) connection is your most practical solution.

NOTE: The indirect connection is the only connection method described here that may be used for communications with either Data General or non-Data General remote systems. Many different connections between your local computer and a non-Data General remote computer system may exist, but for the purposes of this Installation Guide, only the indirect connection is explained.

Direct connection methods presented in this Guide are appropriate only for connection with Data General remote computer systems.

Remote System Configuration

Your local computer system, when properly configured, functions as a terminal of the remote computer when you are running DG/GATE software. Therefore, the remote system should be configured as if your local system were a terminal.

IMPORTANT: If the remote system is using an AOS/VS, AOS, or AOS/WS operating system, the remote communications line should be under the control of EXEC and should be enabled for logging on. Call the System Manager of the remote system and make sure the line has been enabled.

For remote Data General systems, we recommend that the communication line be configured with 8 data bits, no parity, and output flow control. If the line is not generated for output flow control, you may set flow control after you log on to the remote system (more information on this in the TIPS & TECHNIQUES section of this manual).

Non-Data General remote systems may use any type of parity. If the remote system needs to be reconfigured to allow communications, consult the remote system's System Manager.

Begin Your Planning

Complete the DG/GATE Installation form (see next page) to help prepare for the installation.

Consult the System Manager of the remote computer to determine the type of connection and to verify the communications parameters of the remote computer. To communicate, the following parameters of the local and remote systems must agree:

- . How many data bits per character are sent -- 7 or 8?
- . How many stop bits are sent after each character -- 1 or 2?
- . Will parity be used? If so, is parity Odd, Even, None, or Mark?
- . What baud rate will be used -- 110, 300, 1200, 2400, 4800, 9600?

Then go on to the next section, which provides instructions for how to properly attach the cables for the connection you choose.

DG/GATE INSTALLATION FORM

Local computer system: _____

Operating system: _____

Remote computer system: _____

Operating system: _____

Type of connection: ___ Modem (indirect connection)
 ___ RS232-C (direct system-to-system)
 ___ RS422-A (direct system-to-system)
 ___ Current loop (direct system-to-system)

Number of data bits: _____

Number of stop bits: _____

Parity: ___ Odd ___ None
 ___ Even ___ Mark

Baud Rate: _____

Use local echo option (Y/N): _____

3 -- HARDWARE CONFIGURATIONS and CABLING

Now you must prepare your hardware for communications with a remote computer. Hardware configuration and cabling requirements depend upon the type of computer and the type of connection you are using.

If you are using the Desktop computer, see the following segment entitled USING AOS/WS OR DGRDOS to determine proper cabling procedures.

If you are using any other ECLIPSE computer, see the segment entitled USING AOS, AOS/VS, OR RDOS to determine proper cabling procedures.

USING AOS/WS or DGRDOS

Determine the connection you need to communicate with the remote system, then follow the appropriate set of instructions below.

1. To Install the Modem (Indirect) Connection

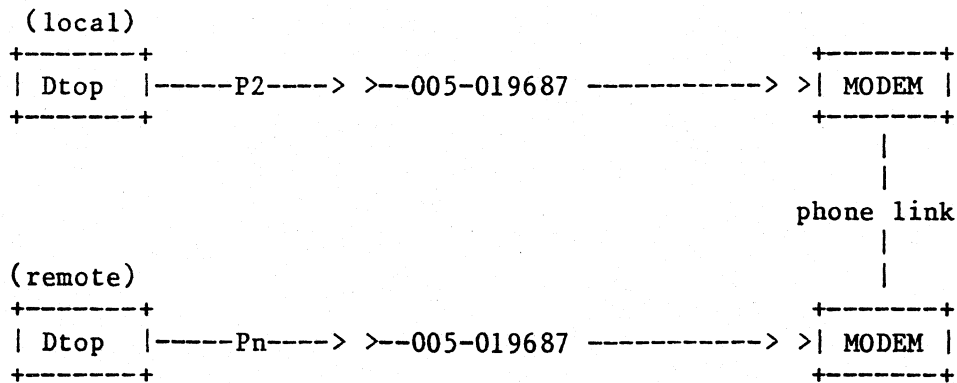
First install your USAM card and its adapter cable, as described in the installation manual provided with your Desktop system. The USAM communications line should be jumpered for RS232-C, with the RING interrupt disabled. The part number of the USAM adapter cable provided with your USAM card is 005-020688 for the 1-line USAM or 005-021041 for the 4-line USAM.

Now attach a modem cable, part number 005-019687. Attach the female end of the modem cable to the connector on the USAM adapter cable. If you are using USAM line 0 for communications, as is recommended, then the appropriate connector is the P2 connector.

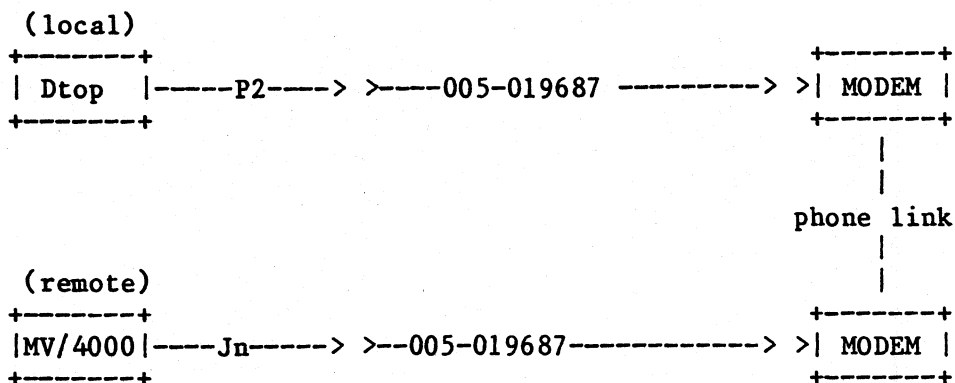
Next, attach the male end of the modem cable to the modem being used.

Here are some examples of modem connections. In these examples, the symbols "-->" and "<--" represent male-type connectors, while the symbols "--<" and ">--" represent female-type connectors.

A) Two Desktop systems connected by modems:



B) Desktop system and MV/4000 IAC-8 system connected by modems:



Hayes SMARTMODEM Switch Settings

The Hayes SMARTMODEM is the only auto-dial modem supported by DG/GATE. The SMARTMODEM switch settings appropriate for your local DG/GATE system are listed below. These settings are suggestions; other switch settings are possible.

Switch	Settings	Explanation
1	DOWN	DTR assumed true
2	DOWN	1 digit result code returned to computer
3	DOWN	Result codes returned to computer
4	DOWN	Do not echo characters in command state
5	UP	Auto-answer of incoming calls
6	DOWN	Carrier detect always up
7	UP	Single telephone-jack installation
8	DOWN	Enables SMARTMODEM 1200 command recognition

2. To Install the RS232-C System-to-System Connection

First install your USAM and its adapter cable, as described in the installation manual provided with your Desktop system. The USAM communications line should be jumpered for RS232-C, with the RING interrupt disabled. The part number of the USAM adapter cable provided with your USAM card is 005-020688 for the 1-line USAM or 005-021041 for the 4-line USAM.

You may then attach an RS232-C system-to-system cable, part number 005-021381. Attach one end of this cable to the connector on the USAM adapter cable. If you are using USAM line 0 for communications, as is recommended, then the appropriate connector is the P2 connector.

Next, attach the other end of this system-to-system cable to the male terminal connectors located on the remote system's bulkhead.

Here are some examples of RS232-C system-to-system connections. In these examples, the symbols "-->" and "<--" represent male type connectors, while the symbols "--<" and ">--" represent female type connectors.

- A) Two Desktop systems connected by an RS232-C system-to-system connection:

```
(local)                                     (remote)
+-----+                                 +-----+
| Dtop |-----P2-----> >--005-021381 --< <----Pn-----| Dtop |
+-----+                                 +-----+
```

- B) Desktop system and MV/4000 IAC-8 system connected by an RS232-C system-to-system connection:

```
(local)                                     (remote)
+-----+                                 +-----+
| Dtop |-----P2-----> >--005-021381 --< <----Jn-----|MV/4000|
+-----+                                 +-----+
```

3. To Install the RS422-A System-to-System Connection

First install your USAM card and its adapter cable, as described in the installation manual provided with your Desktop system. The USAM communications line should be jumpered for RS422-A, with the RING interrupt disabled. The part number of the USAM adapter cable provided with your USAM card is 005-020688 for the 1-line USAM or 005-021041 for the 4-line USAM.

You may then attach an RS422-A system-to-system cable, part number 005-021381. Attach one end of this cable to the connector on the USAM adapter cable. If you are using USAM line 0 for communications, as is recommended, then the appropriate connector is the P2 connector.

Next, attach the other end of this system-to-system cable to the male terminal connectors located on the remote system's bulkhead.

Here are some examples of RS422-A system-to-system connections. In these examples, the symbols "-->" and "<--" represent male type connectors, while the symbols "--<" and ">--" represent female type connectors.

- A) Desktop systems connected by an RS422-A system-to-system connection:

```
(local)
+-----+
| Dtop  |-----P2-----> >--005-021381 --< <----Pn-----| MODEM |
+-----+
+-----+
```

- B) Desktop system and MV machine connected by an RS422-A system-to-system connection:

```
(local)
+-----+
| Dtop  |-----P2-----> >--005-021381 --< <----Jn-----| MV sys |
+-----+
+-----+
```

4. To Install the Current Loop System-to-System Connection

First install your USAM card and its adapter cable, as described in the installation manual provided with your Desktop system. The USAM communications line should be jumpered for 20ma current loop, with the RING interrupt disabled. The part number of the USAM adapter cable provided with your USAM card, is 005-020688 for the 1-line USAM or 005-021041 for the 4-line USAM.

You may then attach the current loop adapter unit, part number 005-21359. Attach the J1, EMULATOR end of this cable to the connector on the USAM adapter cable. If you are using USAM line 0 for communications, as is recommended, then the appropriate connector is the P2 connector.

Then, attach a current loop interface device cable, part number 005-013260. That is, attach the J2 end of this current loop adapter unit to the male end of the current loop interface device cable. Attach the female end of the current loop interface device cable to the male end of the terminal connectors located on the remote system's bulkhead.

Here are some examples of current loop system-to-system connections. In these examples, the symbols "-->" and "<--" represent male type connectors, while the symbols "--<" and ">--" represent female type connectors.

- A) Two Desktop systems connected via a current loop system-to-system connection:

```
(local)                                     (remote)
+-----+                                     +-----+
| Dtop  |--P2--> >-005-021359-< <-005-013260 -< <--Pn--| Dtop  |
+-----+                                     +-----+
```

- B) Desktop system and MV/4000 IAC-16 system connected via a current loop system-to-system connection:

```
(local)                                     (remote)
+-----+                                     +-----+
| Dtop  |--P2--> >-005-021359-< <-005-013260 -< <--Jn--|MV/4000|
+-----+                                     +-----+
```

USING AOS, AOS/VS, or RDOS

Determine the connection you need to communicate with the remote system, then follow the appropriate set of instructions below.

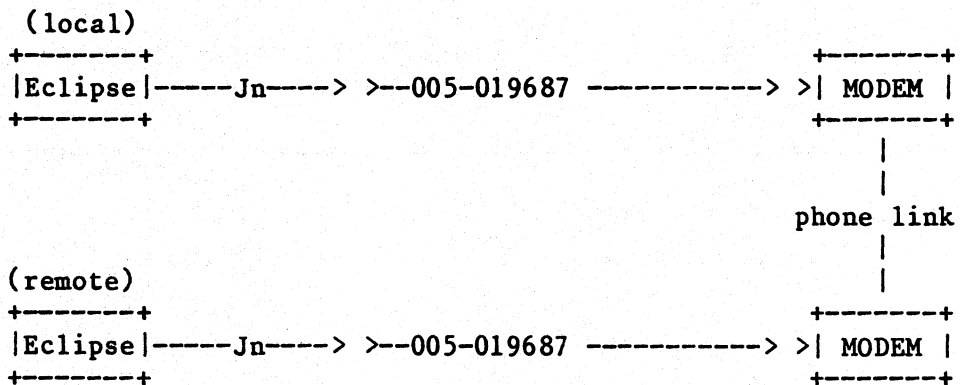
1. To Install the Indirect Connection

Attach a modem cable, part number 005-019687. Attach the female end of the modem cable to the appropriate connector on the IAC or ATI.

Next, attach the male end of the modem cable to the modem being used.

Below is an example of modem connections. The symbols "-->" and "<--" represent male-type connectors, while the symbols "--<" and ">--" represent female-type connectors.

Two ECLIPSE systems connected by modems:



Hayes SMARTMODEM Switch Settings

The Hayes SMARTMODEM is the only auto-dial modem supported by DG/GATE. The SMARTMODEM switch settings appropriate for your local DG/GATE system are listed below. These settings are suggestions; other switch settings are possible.

Switch	Settings	Explanation
1	DOWN	DTR assumed true
2	DOWN	1 digit result code returned to computer
3	DOWN	Result codes returned to computer
4	DOWN	Do not echo characters in command state
5	UP	Auto-answer of incoming calls
6	DOWN	Carrier detect always up
7	UP	Single telephone-jack installation
8	DOWN	Enables SMARTMODEM 1200 command recognition

2. To Install the RS232-C System-to-System Connection

Attach an RS232-C system-to-system cable, part number 005-021381. Attach one end of this cable to the connector on the ALM.

Next, attach the other end of this system-to-system cable to the male terminal connectors located on the remote system's bulkhead.

Below is an example of RS232-C system-to-system connections. The symbols "-->" and "<--" represent male type connectors, while the symbols "--<" and ">--" represent female type connectors.

Two ECLIPSE systems connected by an RS232-C system-to-system connection:

```
(local)                                     (remote)
+-----+                                 +-----+
|Eclipse|-----Jn----> >--005-021381 --< <----Jn----|Eclipse|
+-----+                                 +-----+
```

3. To Install the RS422-A System-to-System Connection

Attach an RS422-A system-to-system cable, part number 005-021381. Attach one end of this cable to the connector on the ALM.

Next, attach the other end of this system-to-system cable to the male terminal connectors located on the remote system's bulkhead.

Below is an example of RS422-A system-to-system connections. The symbols "-->" and "<--" represent male type connectors, while the symbols "--<" and ">--" represent female type connectors.

Two ECLIPSE systems connected by an RS422-A system-to-system connection:

```
(local)                                     (remote)
+-----+                                   +-----+
|Eclipse|-----Jn-----> >--005-021381 --< <-----Jn-----|Eclipse|
+-----+                                   +-----+
```

4. To Install the Current Loop System-to-System Connection

Attach the current loop adapter unit, part number 005-21359. Attach the J1, EMULATOR end of this cable to the appropriate connector on the ALM.

Then, attach a current loop interface device cable, part number 005-013260. That is, attach the J2 end of this current loop adapter unit to the male end of the current loop interface device cable. Attach the female end of the current loop interface device cable to the male end of the terminal connectors located on the remote system's bulkhead.

Below is an example of current loop system-to-system connections. The symbols "-->" and "<--" represent male type connectors, while the symbols "--<" and ">--" represent female type connectors.

Two ECLIPSE systems connected via a current loop system-to-system connection:

(local)		(remote)
+-----+		+-----+
Eclipse --Jn-->	>-005-021359-<	<-005-013260 -<
+-----+		+-----+

4 -- PREPARING YOUR OPERATING SYSTEM

Procedures outlined for each operating system under which DG/GATE can be installed tell you how to prepare your particular system for loading the DG/GATE software.

If you are using **AOS/WS** or **DGRDOS**, the operating system needs initial preparation to accommodate DG/GATE.

For Model 10 and 10SP Desktops, load Revision 5 or later of the System Console Emulator software. Detailed instructions for loading the System Console Emulator are provided with the Desktop system.

For all Desktop models, make sure the AOS/WS or DGRDOS operating system is configured as described in the operating system manual.

Log on to your operating system and proceed with the installation instructions for your particular operating system.

<u>If your operating system is</u>	<u>See</u>
AOS/WS	DG/GATE AOS/WS Installation
DGRDOS	DG/GATE DGRDOS Installation

If you are using **AOS**, **AOS/VS**, or **RDOS**, the operating system needs NO initial preparation. Log on and proceed with the installation instructions pertinent to your particular operating system.

<u>If your operating system is</u>	<u>See</u>
AOS	DG/GATE AOS Installation
AOS/VS	DG/GATE AOS/VS Installation
RDOS	DG/GATE RDOS Installation

DG/GATE AOS/WS INSTALLATION

You must generate the communications line on the local system. The local communication line should be configured with

- . 8 data bits
- . no parity (because DG/GATE generates parity internally)
- . no modem control (DG/GATE controls the modem)

If you are using a Pregen AOS/WS operating system, use the CONFIGURE utility to generate the communications line.

Below is a sample line generation dialogue:

```
AOS is already configured.
Do you want to reconfigure (Y or N)? Y
Please type your system model number (10, 10SP, 20, or 30)? 20
Is the system console D410-D460 compatible (Y or N)? N
How many diskette units do you have (1 or 2)? 2
Do you want to reserve line 0 for communications (Y or N)? Y
Is line 0 connected via a modem (Y or N)? N
What is the baud rate of line 0 (300, 1200, 2400,
4800, 9600)? [4800] 4800
```

This dialogue generates line 0 with a baud rate of 4800 and specifies a no modem connection.

If your system is not a pregen system follow instructions for AOSGEN as described in the USING AOS ON DESKTOP GENERATION SYSTEMS manual (order #069-058). Below is an example of an AOSGEN dialogue for DG/GATE:

```
ENTER A COMMAND: E (E for edit)
NAME OF DEVICE TO EDIT: ASLM
DEVICE CODE [34]: 34
ASLM BASE LINE NUMBER [0]: 0
LINES [??]: 0
CONSOLE TYPE [CRT3]: CRT3
INPUT BUFFER LENGTH [96]: 255
OUTPUT BUFFER LENGTH [128]: 255
CHARACTERISTIC WORD 0 [STANDARD]: STANDARD
CHARACTERISTIC WORD 1 [STANDARD]: STANDARD
CHARACTERISTIC WORD 2
    LINES PER PAGE [STANDARD]: STANDARD
    CHARS PER LINE [STANDARD]: STANDARD
CHARACTERISTIC WORD 3 [STANDARD]: STANDARD
INITIALIZATION WORD [STANDARD]: ?CLN8 ?CS10 ?CPRO ?CSBDS ?CR12H
```

This dialogue generates line 0 with 8 data bits, 1 stop bit, no parity, split-baud disable, and a line speed of 1200 baud.

After the communication line is generated, take down your operating system and then bring it up again to incorporate the changes you specified. (This process is commonly called "re-booting". See your operating system manual for instructions on how to re-boot your system.)

Check the configuration of the remote computer system. If the remote operating system is AOS, AOS/VS, or AOS/WS, the communication line should be under the control of EXEC and be enabled for logging on. Line attributes (baud rate, number of data bits and stop bits, parity) and type of interface should agree. (Non-DG remote systems may use any type of parity because DG/GATE generates the appropriate parity.)

Follow instructions included in the DG/GATE release notice for loading DG/GATE software onto your system. Once DG/GATE is loaded, it can be used. See the DG/GATE User's Guide section of this manual for instructions on how to use DG/GATE.

DG/GATE DGRDOS INSTALLATION

You must generate the communications line on the local system. The local communications line should be generated with:

- . 8 data bits
- . no parity (because DG/GATE generates parity internally)
- . no modem control (DG/GATE controls the modem)

If you are using a Pregon DGRDOS operating system, use the CONFIGURE utility to generate the communication line. Below is a sample line generation dialogue:

```
Memory size in Kb (12802048): 128
Number of FG/BG sharable pages (0-255): 0
Number of DG I/O channels (0-255): 32
Number of FG I/O channels (0-255): 0
Number of stacks (1-10): 4
Number of system buffers (8-36): 8
Number of cells (9-64): 64
Number of directories accessible at one time (1-64): 10
-----
8 bit character support for master console ($TTO)? (Y/N): N
8 bit character support for second console ($TT01)? (Y/N): N
Printer ($LPT) ? (0=NONE, 1=$TTO, 2=$TT01, 3=USAM line 0,
4=USAM line 1, 5=USAM line 3, 6=USAM line 3): 0
Plotter ($PLT) ? (0=NONE, 1=$TTO, 2=$TT01, 3=USAM line 0,
4=USAM line 1, 5=USAM line 2, 6=USAM line 3): 0
Magnetic tape drive? (Y/N): N
USAM? (Y/N): Y
-----
Break character for USAM: 1
Number of lines on USAM (1-4): 4
-----
Line number (0-3): 0
Line speed (in bits/second) for USAM from table below: 11
0=3600, 1=19200, 2=50, 3=75, 4=134.5, 5=2000, 6=600,
7=2400, 8=9600, 9=4800, 10=1800, 11=1200, 12=7200,
13=300, 14=150, 15=110
Number of stop bits: 1
Number of data bits: 8
Parity (0=NONE, 1=ODD, 2=EVEN): 0
Modem (Y/N): N
Loopback mode (Y/N): N
Initial state of the control signals (0=LOW, 1=HIGH):
Data Set Ready (DSR): 0
Request To Send (RTS): 1
Data Terminal Ready (DTR): 1
```

This dialogue generates line 0 for no parity, 8 data bits, 1 stop bit, 1200 baud, and no modem control.

If your system is not a pregennd system follow instructions for SYSGEN as described in the USING DG/RDOS ON DESKTOP GENERATION SYSTEMS manual (order #069-056). A sample dialogue is provided in the RDOS Installation instructions.

After the communication line is generated, take down your operating system and then bring it up again to incorporate the changes you specified. (This process is commonly called "re-booting". See your operating system manual for instructions on how to re-boot your system.)

Check the configuration of the remote computer system. If the remote operating system is AOS, AOS/VS, or AOS/WS, the communication line should be under the control of EXEC and be enabled for logging on. Line attributes (baud rate, number of data bits and stop bits, parity) and type of interface should agree. (Non-DG remote systems may use any type of parity because DG/GATE generates the appropriate parity.)

Follow instructions included in the DG/GATE release notice for loading DG/GATE software onto your system. Once DG/GATE is loaded, it can be used. See the DG/GATE User's Guide section of this manual for instructions on how to use DG/GATE.

DG/GATE AOS INSTALLATION

You must generate the communication line on the local computer. The local communication line should be generated with:

- . 8 data bits
- . no parity (because DG/GATE generates parity internally)
- . without modem control (DG/GATE controls the modem)

If you are using an IAC or ASLM communication device, the generated baud rate of the local communication line does not have to match the remote system's baud rate. DG/GATE sets the baud rate according to parameters in the "phonebook entry" for the remote system (more on this in the User's Guide).

If you are using a non-IAC or non-ASLM communication device, generate the local communication line with a baud rate that matches the baud rate of the remote system's communication line. (Since you must re-generate the local communication line everytime you communicate with a remote system with a different baud rate, you may prefer to generate several communication lines each with different baud rates.)

To generate the line follow instructions for AOSGEN as described in the HOW TO GENERATE & RUN AOS manual (order #093-217). Below are examples of AOSGEN dialogues appropriate for specifying a DG/GATE line:

For an IAC device

```
ENTER A COMMAND: A (A for add)
NAME OF DEVICE TO ADD: IAC
DEVICE CODE (65): 65
IAC BASE LINE NUMBER (0): 0
IAC DEVICE TYPE (??): 8
IAC SPLIT BAUD RATE (NONE): NONE
LINES (??): 0
CONSOLE TYPE (CRT3): CRT3
INPUT BUFFER LENGTH (96): 255
OUTPUT BUFFER LENGTH (128): 255
CHARACTERISTIC WORD 0 (STANDARD): STANDARD
CHARACTERISTIC WORD 1 (STANDARD): STANDARD
CHARACTERISTIC WORD 2
      LINES PER PAGE (STANDARD): STANDARD
      CHARS PER LINE (STANDARD): STANDARD
CHARACTERISTIC WORD 3 (STANDARD): STANDARD
INITIALIZATION WORD (STANDARD): ?CLN8 ?CS10 ?CPRO ?CSBDS ?CRI2H
```

This dialogue generates line 0 with 8 data bits, 1 stop bit, no parity, 1200 baud, and split baud rate.

For a non-IAC device

```
ENTER A COMMAND: A
NAME OF DEVICE TO ADD: ALM
I/O PROCESSOR (NONE) : NONE
LINES (??): 0
CONSOLE TYPE (CRT3): CRT3
INPUT BUFFER LENGTH (96): 255
OUTPUT BUFFER LENGTH (128): 255
CHARACTERISTIC WORD 0 (STANDARD): STANDARD
CHARACTERISTIC WORD 1 (STANDARD): STANDARD
CHARACTERISTIC WORD 2
    LINES PER PAGE (STANDARD): STANDARD
    CHARS PER LINE (STANDARD): STANDARD
CHARACTERISTIC WORD 3 (STANDARD): STANDARD
INITIALIZATION WORD (STANDARD): ?PAR0 ?COD3 ?STP0 ?CLK2
```

This dialogue generates line 0 with 8 data bits, 1 stop bit, no parity, and clock 2 (which is assumed to be a line speed of 1200 baud).

These lines were generated with no parity. However, they can be used to communicate with a remote system that does generate parity. DG/GATE generates the appropriate parity bit internally by using software routines when you specify parity generation in the phonebook entry for the remote system.

After the communication line is generated, take down your operating system and then bring it up again to incorporate the changes you specified. (This process is commonly called "re-booting". See your operating system manual for instructions on how to re-boot your system.)

Check the configuration of the remote computer system. If the remote operating system is AOS, AOS/VS, or AOS/WS, the communication line should be under the control of EXEC and be enabled for logging on. Line attributes (baud rate, number of data bits and stop bits, parity) and type of interface should agree. (Non-DG remote systems may use any type of parity because DG/GATE generates the appropriate parity.)

Follow instructions included in the DG/GATE release notice for loading DG/GATE software onto your system. Once DG/GATE is loaded, it can be used. See the DG/GATE User's Guide section of this manual for instructions on how to use DG/GATE.

DG/GATE AOS/VS INSTALLATION

You must generate the communication line on the local computer. The local communication line should be configured with:

- . 8 data bits
- . no parity (because DG/GATE generates parity internally)
- . without modem control (DG/GATE controls the modem)

If you are using an IAC communication device, the generated baud rate of the local communication line does not have to match the remote system's baud rate. DG/GATE sets the baud rate according to parameters in the "phonebook entry" for the remote system (more on this in the User's Guide).

If you are using a non-IAC communication device, generate the local communication line with a baud rate that matches the baud rate of the remote system's communication line. (Since you must re-generate the local communication line everytime you want to communicate with a remote system with a different baud rate, you may prefer to generate several communication lines each with a different baud rate.)

To generate the line follow instructions for VSGEN as described in the HOW TO GENERATE & RUN AOS/VS ON ECLIPSE MV/FAMILY COMPUTERS manual (order #093-243). Below are sample VSGEN dialogues for DG/GATE:

For an IAC device

```
ENTER A COMMAND: A (A for add)
NAME OF DEVICE TO ADD: IAC
DEVICE CODE (65): 65
IAC BASE LINE NUMBER (0): 0
IAC DEVICE TYPE (??): 8
IAC SPLIT BAUD RATE (NONE): NONE
LINES (??): 0
CONSOLE TYPE (CRT3): CRT3
INPUT BUFFER LENGTH (96): 255
OUTPUT BUFFER LENGTH (128): 255
CHARACTERISTIC WORD 0 (STANDARD): STANDARD
CHARACTERISTIC WORD 1 (STANDARD): STANDARD
CHARACTERISTIC WORD 2
    LINES PER PAGE (STANDARD): STANDARD
    CHARS PER LINE (STANDARD): STANDARD
CHARACTERISTIC WORD 3 (STANDARD): STANDARD
INITIALIZATION WORD (STANDARD): ?CLN8 ?CS10 ?CPRO ?CSBDS ?CR12H
```

The initialization word specifies 8 data bits, 1 stop bit, no parity, and 1200 baud.

For a non-IAC device

```
ENTER A COMMAND: A
NAME OF DEVICE TO ADD: ATI
LINES (??): 0
CONSOLE TYPE (CRT3): CRT3
INPUT BUFFER LENGTH (96): 255
OUTPUT BUFFER LENGTH (128): 255
CHARACTERISTIC WORD 0 (STANDARD): STANDARD
CHARACTERISTIC WORD 1 (STANDARD): STANDARD
CHARACTERISTIC WORD 2
      LINES PER PAGE (STANDARD): STANDARD
      CHARS PER LINE (STANDARD): STANDARD
CHARACTERISTIC WORD 3 (STANDARD): STANDARD
INITIALIZATION WORD (STANDARD): ?PAR0 ?COD3 ?STP0 ?CLK2
```

Here, the initialization word specifies 8 data bits, 1 stop bit, no parity, and clock 2 (which is assumed to be a line speed of 1200 baud).

These lines were generated with no parity. However, they can be used to communicate with a remote system that does generate parity. DG/GATE generates the appropriate parity bit internally by using software routines when you specify parity generation in the phonebook entry for the remote system.

After the communication line is generated, take down your operating system and then bring it up again to incorporate the changes you specified. (This process is commonly called "re-booting". See your operating system manual for instructions on how to re-boot your system.)

Check the configuration of the remote computer system. If the remote operating system is AOS, AOS/VS, or AOS/WS, the communication line should be under the control of EXEC and be enabled for logging on. Line attributes (baud rate, number of data bits and stop bits, parity) and type of interface should agree. (Non-DG remote systems may use any type of parity because DG/GATE generates the appropriate parity.)

Follow instructions included in the DG/GATE release notice for loading the DG/GATE software onto your system. Once DG/GATE is loaded, it can be used. See the DG/GATE User's Guide section of this manual for instructions on how to use DG/GATE.

DG/GATE RDOS INSTALLATION

You must generate the communications line on the local system. The local communications line should be generated with:

- . 8 data bits
- . no parity (because DG/GATE generates parity internally)
- . no modem control (DG/GATE controls the modem)

You must properly configure the RDOS operating system before executing DG/GATE. Use the SYSGEN program to specify the type of communications controllers on your system. Use the source file ALMSPD.SR to specify the line characteristics of the lines that DG/GATE uses for communications.

To generate the line follow instructions for SYSGEN as described in the HOW TO LOAD & GENERATE RDOS manual (order #069-400013). Below is a sample SYSGEN dialogue appropriate for specifying a DG/GATE line:

```
RDOS SYSTEM GENERATOR REV 7.xx
VALID ANSWERS ARE PRESENTED IN PARENTHESES FOLLOWING EACH
QUESTION. CHOOSE THE APPROPRIATE ONE.

ENTER PROCESSOR MODEL. (CURRENTLY SUPPORTED MODELS
INCLUDE: NOVA NOVA/2 NOVA/3 NOVA/4 NOVA/800
NOVA/820 NOVA/830 NOVA/840 NOVA/1200 S/20
S/120 S/130 AP/130 S/140 C/150 S/200
S/230 S/250 S/250IAP C/300 C/330 AND C/350) : C/330

MAPPED SYSTEM? ("0"=NO "1"=YES) 1
ENTER MEMORY SIZE IN NUMBER OF 1 KW PAGES (64-1024): 256
SYSTEM OVERLAYS RESIDENT ? ("0"=NO "1"=YES) 0
SIZE OF SHARED DATA AREA IN PAGES (0-224) 16
MAXIMUM NUMBER OF CHANNELS BACKGROUND WILL USE(1-255) 64
MAXIMUM NUMBER OF CHANNELS FOREGROUND WILL USE(0-255) 64

NUMBER OF NOVADISK DISK CONTROLLERS(0-2) 0
NUMBER OF 6063/6064 DISK CONTROLLERS(0-2) 0
NUMBER OF 6060/6061/6067/6122/6160/6161 DISK CONTROLLERS(0-2) 1
DEVICE PRIMARY("0") OR SECONDARY("1")? 0
CONTROLLER #1 6160/6161 TYPE? ("0"=NO "1"=YES) 0
NUMBER OF DEVICES FOR CONTROLLER #1 (1-4) 1
NUMBER OF OTHER TYPES OF MOVING HEAD DISK CONTROLLERS(0-2) 1
DEVICE PRIMARY("0") OR SECONDARY("1")? 0
NUMBER OF DEVICES FOR CONTROLLER #1(1-4) 1
TOP LOADER(S)? ("0"=NO "1"=YES) 0
ENTER BAD BLOCK POOL SIZE IN BLOCKS (0-512) 12
DUAL PROCESSORS (IPB)? ("0"=NO "1"=YES) 0
ENTER NUMBER OF STACKS (1-10) 4
ENTER NUMBER OF EXTRA CELLS (0-64) 64
TUNING? ("0"=NO "1"=YES) 0
ENTER NUMBER OF EXTRA BUFFERS REQUIRED (0-63) 8
```

```

MAXIMUM NUMBER OF SUB-DIRECTORIES/SUB-PARTITIONS
ACCESSIBLE AT ONE TIME (0-64) 20
ENTER NUMBER OF CONTROLLERS FOR MTA (0-2) 1
  DEVICE PRIMARY("0") OR SECONDARY("1")? 0
  ENTER NUMBER OF DEVICES FOR CONTROLLER #1 (1-8) 1
ENTER NUMBER OF CONTROLLERS FOR CTA(0-2) 0
AUTO RESTART ON POWER FAIL? ("0"=NO "1"=YES) 0
OPERATOR MESSAGES? ("0"=NO "1"=YES) 0
RTC? ("0"=NO "1"=YES) 1
  DEVICE PRIMARY("0") OR SECONDARY("1")? 0
  ENTER RTC FREQ (1=10HZ 2=50HZ 3=60HZ 4=100HZ 5=1000HZ) 1
ENTER NUMBER OF PTR(0-2) 0
ENTER NUMBER OF PTP(0-2) 0
ENTER NUMBER OF LPT(0-2) 1
  ENTER COLUMN SIZE FOR LPT #1 (80 OR 132) 132
  DATA CHANNEL LINE PRINTER? ("0"=NO "1"=YES) 1
ENTER NUMBER OF CDR(0-2) 0
ENTER NUMBER OF PLT(0-2) 0
ENTER NUMBER OF MCA(0-2) 0
QTY? ("0"=NO "1"=YES) 0
ULM? ("0"=NO "1"=YES) 0
ALM? ("0"=NO "1"=YES) 1
  DEVICE PRIMARY("0") OR SECONDARY("1")? 0
  ALM CLOCK FREQUENCY? (0-3) 0
  ARE THERE ANY MODEMS ? ("0"=NO "1"=YES) 0
  USE DEFAULT ALM/QTY INTERRUPT CHARACTERS? ("0"=NO "1"=YES) 1
SECOND TTY? ("0"=NO "1"=YES) 1
CORE DUMP? ("0"=NO "1"=LPT "2"=MTA "3"=6030 "4"=6097) 0
ANY USER DEFINED DEVICES ? ("0"=NO "1"=YES) 0

```

Compile and link the source file ALMSPD with your operating system (see the RDOS operating system manual for instructions on how to do this).

Below is an ALMSPD excerpt that specifies a 1200 Baud non-modem DG/GATE line as ALM-8 line number 0. This example assumes that clock 2 on the ALM board has been jumpered as a 1200 baud clock.

```

;COPYRIGHT (C) DATA GENERAL CORPORATION 1977, 1978, 1979, 1980,
;1982 ALL RIGHTS RESERVED.
;LICENSED MATERIAL-PROPERTY OF DATA GENERAL CORPORATION.

```

```

.TITLE  ALMSPD
.RB     ALMSPD.RB

LNDEF   00,2,1,8,NO,NOLOOPBACK,NOMODEM
LNDEF   01,DEFAULT
LNDEF   02,DEFAULT
LNDEF   03,DEFAULT
LNDEF   04,DEFAULT
LNDEF   05,DEFAULT

```

```
LNDEF 06,DEFAULT
LNDEF 07,DEFAULT
```

```
.END
```

After the communication line is generated, take down your operating system and then bring it up again to incorporate the changes you specified. (This process is commonly called "re-booting". See your operating system manual for instructions on how to re-boot your system.)

Check the configuration of the remote computer system. If the remote operating system is AOS, AOS/VS, or AOS/WS, the communication line should be under the control of EXEC and be enabled for logging on. Line attributes (baud rate, number of data bits and stop bits, parity) and type of interface should agree. (Non-DG remote systems may use any type of parity because DG/GATE generates the appropriate parity.)

Follow instructions included in the DG/GATE release notice for loading DG/GATE software onto your system. Once DG/GATE is loaded, it can be used. See the DG/GATE User's Guide section of this manual for instructions on how to use DG/GATE.



TWO

User's Guide



1 -- GENERAL OPERATING INSTRUCTIONS

The User's Guide section of this manual tells you how to operate and use DG/GATE.

The user's instructions for each function in the DG/GATE application are organized as follows:

- . A sample screen is provided for each function
- . Program prompts are indicated in all capital letters on the left side of the page. Default values are also shown
- . Text to the right of a program prompt explains how you may respond to the prompt
- . Error messages and technical terms are defined in appendixes

How to Enter Information

To enter information, type the appropriate response, then press the NEW LINE (NL) key for AOS, AOS/VS, and AOS/WS systems or the CR key for RDOS and DGRDOS systems. (This manual references the NL key only.)

If you make an error entering information, use the DEL (Delete) key to erase your entry. Then type the correct information.

Special Keys

DG/GATE uses the CONTROL-SHIFT function key 15 (CTRL ^F15) and the BREAK ESC key.

The F15 key is located in the row of keys across the top of your keyboard. To use the key, press the CTRL, SHIFT, and the F15 key simultaneously. CTRL ^F15, referred to as the interrupt sequence key, is used to interrupt current processing and return you to the DG/GATE Main Menu.

You may easily define another key or sequence of keys for this purpose, if you prefer. And if you are using a DG 6053 terminal, you MUST redefine the interrupt sequence because you do not have 15 function keys. You specify the interrupt sequence when you define a phonebook entry.

The BREAK ESC key at the left of your keyboard is used to exit any DG/GATE task and return to the Main Menu. Any entries are discarded. The ESC key is most convenient when you want to exit a task without completing your entries. You may press the ESC key at any prompt.

2 -- HOW TO EXECUTE DG/GATE

If DG/GATE is not set up to execute automatically when you log on to your computer, execute the DG/GATE program from the CLI prompt. Type

GATE

at the CLI prompt. The program is executed and you may select an option from the Main Menu.

USING SWITCHES

DG/GATE can be executed with a sequence of characters, called switches, that tell DG/GATE to perform special functions.

<u>Switch</u>	<u>Meaning</u>
P	Allows you to rename the phonebook. The default phonebook name is GATEPHONEB. The P switch renames the phonebook to whatever filename you specify.
S	Allows DG/GATE to access each line in the phonebook until a successful connection is established. However, any phonebook entry with a DG/GATE-defined USAM is skipped. The S switch is most useful when fewer outbound ports exist on a computer than people who want to use them.
T	Must be used in conjunction with the S switch. Allows DG/GATE to perform the phonebook access selection process the number of times you specify.
N	Must be used in conjunction with the S switch. Allows the interrupt sequence key to end connections and exit DG/GATE without displaying any menus.
I	Must be used in conjunction with the S switch. Allows DG/GATE to end a session if more minutes than you specify elapse before the keyboard is used.

NOTE: Not all switches are valid for all operating systems. For AOS, AOS/VS, and AOS/WS, you may use any switch listed above. For RDOS and DGRDOS, you may use only P.

To use switches, type the word GATE and the switches of your choice at the CLI prompt on your system. (See examples below.)

The format for using switches differs between AOS, AOS/VS, or AOS/WS systems and RDOS or DGRDOS systems. For AOS, AOS/VS, and AOS/WS systems use slashes between switches and the equal sign (=) to indicate given values. For RDOS and DGRDOS systems use spaces between switches and the slash (/) to indicate given values.

For example, for an AOS, AOS/VS, and AOS/WS system, if you type

GATE/P=Outbound/I=3

at the CLI prompt, the phonebook is renamed to OUTBOUND and DG/GATE terminates if the keyboard is idle for more than 3 minutes.

For an RDOS or DGRDOS system, you would type

GATE P/Outbound

to rename the phonebook (any other switch is invalid).

REMEMBER

To access the DG/GATE Main Menu type

GATE

at the CLI prompt with or without your choice of switches.

3 -- DG/GATE MAIN MENU

After DG/GATE is executed, the system displays the DG/GATE Main Menu.

```

                DG/GATE Revision  2.35
                 Main Menu

1. Maintain Phone Directory
2. Begin or Resume Remote Communications
3. End Remote Communications
4. Enable Communications Logging
5. Disable Communications Logging
6. Transfer a File
7. Use Local CLI
8. DG/GATE Information
9. Exit DG/GATE

    Enter choice:

Remote communications is inactive.
Communications logging is disabled.
```

ENTER CHOICE:

Type the number of your choice

If you choose

Follow instructions for

Option 1	Maintain Phone Directory
Option 2	Begin or Resume Remote Communications
Option 3	End Remote Communications
Option 4	Enable Communications Logging
Option 5	Disable Communications Logging
Option 6	Transfer a File
Option 7	Use Local CLI
Option 8	DG/GATE Information Menu
Option 9	Exit DG/GATE

MAINTAIN PHONE DIRECTORY

This option allows you to maintain a list of phone numbers for remote computers. You may keep a list of up to 15 "most used" phone numbers to be used when beginning remote communications.

DG/GATE Revision 2.35 Phone Directory	
Selection	Computer Name
a)	Phoneline 1--New York
b)	Phoneline 2--ANSI

Functions : A = Add, D = Delete, C = Change, L = List
Enter function choice (new line to return to main menu):

ENTER FUNCTION CHOICE
(NEW LINE TO RETURN
TO MAIN MENU)

Choose one of the following:

- . Type A to add a phone number
- . Type D to delete a phone number
- . Type C to change a phone number
- . Type L *to list information for a specific remote system on file

Then follow the instructions for your response

(A)DD

DG/GATE Revision 2.35
Remote Computer Definition

Multiplexor type (U or A): A
Console number (0 - 255): @CON20
Parity (0=None, 1=Odd, 2=Even, 3=Mark) 0
Is the line connected to a modem? (Y/N) N
Use local echo when communicating? (Y/N) N
Available terminal types:
1 = DG standard
2 = ANSI
3 = TTY
4 = LEXIS/NEXIS
Which terminal type should be used? 1
Use extended pass through when communicating? (Y/N) N
Enter octal keyboard interrupt sequence: 036 040
Send CNTL "S"/"Q" to host? (Y/N) Y

Save this information in the online phone directory? (Y/N) Y
Enter 1-30 character name to call the computer in the online directory:
Phoneline 1--New York

MULTIPLYXOR TYPE:

Default: A for
AOS, AOS/VS and
AOS/WS systems; U
for RDOS and DGRDOS
systems

Choose one of the following:

- . Type U if you are using a USAM, ULM, ASLM, or an IAC communication device
- . Type G if you are using a GATE-defined USAM (for AOS and AOS/WS only)
- . Type L if you are using an ULM communication device (for AOS, AOS/WS, RDOS, and DGRDOS only)
- . Type A if you are using an ALM or ATI communication device

CONSOLE NUMBER (0-255):

Default: @CON0
(for AOS, AOS/VS, and
AOS/WS systems)

You must know which lines have been generated for use with DG/GATE. Ask your System Manager or refer to your line generation dialogue for the line number

MULTIPLYXOR LINE NUMBER

(0-63):

Default: QTY0
(for RDOS and DGRDOS
systems)

Type the physical line number that you will use for communications

or

Press NL to use the default value

WHICH BAUD RATE
SHOULD BE USED?
Default: 0

NOTE: This prompt appears only when you
specify U, G, or L for the multiplexor type

Press NL to use the default value

or

Type the number corresponding to the baud
rate you want to use. Rates may be:

0 = AOS or RDOS default
1 = 110
2 = 300
3 = 600
4 = 1200
5 = 2400
6 = 4800
7 = 9600 (AOS, AOS/VS, and
AOS/WS systems only)

WHICH CLOCK SPEED SHOULD
BE USED?
Default: 0

NOTE: This prompt appears only when you
specify A for multiplexor type on an
RDOS or DGRDOS system

Press NL to use the default value

or

Type the number corresponding to the clock
speed you want to use

0 = RDOS default
1 = ALM Clock Speed 0
2 = ALM Clock Speed 1
3 = ALM Clock Speed 2
4 = ALM Clock Speed 3

PARITY (0=NONE, 1=ODD,
2=EVEN, 3=MARK)
Default: 0

Type the number corresponding to the
parity of the remote system to allow DG/GATE
to generate the appropriate parity

IS THIS LINE CONNECTED
TO A MODEM? (Y/N)
Default: N

Choose one of the following:

- . Press NL if you are not using a modem
- . Type Y if you are using a modem

```
+-----+  
| IS IT AN AUTO-DIAL MODEM? (Y/N) |  
+-----+
```

Default: N

- . Type Y if this is a HAYES auto-dial modem

```

+-----+
| ENTER 1-39 CHARACTER TELEPHONE |
| NUMBER                           |
+-----+

```

Type the phone number of the remote system, using commas where you want the modem to pause while dialing.
 Ex.: 404,448,6072.

- . Press NL if your modem is not an auto-dial modem

USE LOCAL ECHO WHEN COMMUNICATING? (Y/N)
 Default: N

Press NL to allow the remote computer to echo characters to the screen

or

Type Y to allow the terminal to echo characters to the screen

AVAILABLE TERMINAL TYPES:
 1 = DG STANDARD
 2 = ANSI
 3 = TTY
 4 = LEXIS/NEXIS
 WHICH TERMINAL TYPE SHOULD BE USED?
 Default: 1

Choose one of the following:

- . Press NL to use the default value
- . Type 2 if you want to communicate as an ANSI-standard terminal
- . Type 3 if you want to communicate as a teletype terminal
- . Type 4 if you want to communicate as a Lexis/Nexis terminal

USE EXTENDED PASS THROUGH WHEN COMMUNICATING? (Y/N)
 Default: N

Press NL to transmit 7 bits per character (the high bit is masked off)

or

Type Y to transmit 8 bits per character

ENTER OCTAL KEYBOARD INTERRUPT SEQUENCE:
 Default: CTRL ^F15

Choose one of the following:

- . Press NL to use the default interrupt sequence (Control Shift Function key 15)

- . Define a preferred key or key sequence as the keyboard interrupt. You may type up to 12 character octal values. Separate each octal value with a space

NOTE: Make sure the remote system does not use the key(s) you choose for any other purpose

Specify the character octal values for the key(s) you choose

If you are using 7-bit pass through each octal value must be in the range of 0-177

If you are using extended (8-bit) pass through each octal value must be in the range of 0-377

NOTE: See tables accessed through the DG/GATE Information menu for character octal values.

SEND CNTL 'S'/'Q' TO
HOST? (Y/N)
Default: Y

Press NL to use the control-S/control-Q sequence to signal the remote computer when to stop and start transmissions

or

Type N if you are communicating with a non-DG system that is not equipped to interpret the control-S/control-Q sequence

WARNING: If you type N, you cannot control transmissions. The remote computer may continue to send data which may not be retained in its entirety by the local computer.

SAVE THIS INFORMATION IN
THE ONLINE PHONE
DIRECTORY? (Y/N)
Default: Y

Choose one of the following:

- . Press NL to save this remote computer definition for future use

```
+-----+  
| ENTER 1-30 CHARACTER NAME TO CALL |  
| THE COMPUTER IN THE ONLINE DIRECTORY |  
+-----+
```

Type the name to give to this remote system. The information is saved in the Phone Directory and the system returns to the Phone Directory menu

- . Type N to discard your entries. The system returns to the Phone Directory menu

ENTER FUNCTION CHOICE

Select another function

or

Press NL to return to the Main Menu

(D)ELETE

ENTER SELECTION NUMBER:

Type the letter of the entry to delete. The system displays information on file for this remote computer

+-----+
| DO YOU REALLY WANT TO DELETE THIS ENTRY? |
+-----+

Default: Y

- . Press NL to delete this entry

or

- . Type N to retain this entry

The system returns to the Phone Directory menu

ENTER FUNCTION CHOICE

Select another function

or

Press NL to return to the Main Menu

(C)HANGE

ENTER SELECTION NUMBER: Type the letter of the entry you want to change

Press NL to display each line in the phonebook entry

Type your changes, pressing NL to skip correct information

After the last prompt is displayed the system returns to the Phone Directory menu

ENTER FUNCTION CHOICE Select another function

or

Press NL to return to the Main Menu

(L)IST

ENTER SELECTION NUMBER: Type the letter of the entry you want to view. The system displays the definition on file for this entry

PRESS NEW LINE TO CONTINUE: Press NL. The system returns to the Phone Directory menu

ENTER FUNCTION CHOICE Select another function

or

Press NL to return to the Main Menu

BEGIN OR RESUME REMOTE COMMUNICATIONS

This option allows you to begin or resume communications with a remote computer. If you are beginning a communications session, you specify the remote computer by choosing an entry from the phonebook directory.

NOTE: If you are resuming a remote communications session, follow instructions for RESUME REMOTE COMMUNICATIONS.

=====

BEGIN REMOTE COMMUNICATIONS

=====

DG/GATE Revision 2.35
Phone Directory

Selection	Computer Name
a)	Phoneline 1--New York
b)	Phoneline 2--ANSI

Enter selection, or strike NEWLINE to return to main menu:

ENTER SELECTION OR STRIKE
NEW LINE TO RETURN TO
MAIN MENU:

The system displays the names of any remote computer systems already on file. Choose one of the following:

- . Type the letter that corresponds to the computer you want to communicate with

Then follow instructions for AFTER YOU
HAVE SELECTED THE REMOTE COMPUTER

- . Press NL to return to the Main Menu

AFTER YOU HAVE SELECTED THE REMOTE COMPUTER

For modem connections:

- . If your modem has auto-dial, the modem calls the remote computer automatically
- . If your modem does not have auto-dial, issue modem commands to call the number you desire. (See the operating manual for your modem.)

For all connections:

After DG/GATE makes the connection, press NL to begin the session

NOTE: For remote DG systems, if nothing happens when you press NL, check with the remote System Manager to verify that the communication line is enabled for logging on.

After you are finished performing the tasks required and want to return to the DG/GATE Main Menu, log off the remote system, then press the interrupt sequence (default is CTRL ^F15)

RESUME REMOTE COMMUNICATIONS

When you continue a remote communication, DG/GATE returns you to the precise place you were when communication was interrupted

Continue the communication

After you are finished performing the tasks required and want to return to the DG/GATE Main Menu, log off the remote system. Then press the interrupt sequence (default is CTRL ^F15)

END REMOTE COMMUNICATIONS

This option ends the connection with the remote computer. You must use this option to end connection even if your connection was unsuccessful.

NOTE: Be sure to log off the remote system before you end a communications session. Then press the interrupt sequence (default is CTRL ^F15) to return to the DG/GATE Main Menu.

```
+-----+
|                                         |
|               DG/GATE Revision 2.35   |
|                   Main Menu           |
|                                         |
|      1. Maintain Phone Directory      |
|      2. Begin or Resume Remote        |
|      3. End Remote Communications     |
|      4. Enable Communications Logging  |
|      5. Disable Communications Logging |
|      6. Transfer a File               |
|      7. Use Local CLI                 |
|      8. DG/GATE Information           |
|      9. Exit DG/GATE                  |
|                                         |
|           Enter choice: 3             |
|                                         |
|      End Remote Communications ? (Y/N) Y
|                                         |
|                                         |
| Remote communications is active:      |
|   Phoneline 1--New York              |
| Communications logging is disabled.   |
|                                         |
+-----+
```

END REMOTE
COMMUNICATIONS? (Y/N)
Default: Y

Choose one of the following:

- . Press NL to end this remote communications session
- . Type N if you do not want to end this session

The cursor returns to the ENTER CHOICE prompt

ENABLE COMMUNICATIONS LOGGING

This option allows you to begin logging data. When you begin a logging session, all data sent or received during communications is retained in a file. Data may be logged to a disk file or sent directly to a printer.

```

                                DG/GATE Revision 2.35
                                Main Menu

                                1. Maintain Phone Directory
                                2. Begin or Resume Remote Communications
                                3. End Remote Communications
                                4. Enable Communications Logging
                                5. Disable Communications Logging
                                6. Transfer a File
                                7. Use Local CLI
                                8. DG/GATE Information
                                9. Exit DG/GATE

                                Enter choice: 4

                                Name of file to log to: FILE1

Remote communications is inactive.
Communications logging is disabled.
```

ENTER CHOICE:

Type the option number to ENABLE COMMUNICATIONS LOGGING. Then decide whether you want to

- . log data directly to a printer
- . log data to a disk file

Follow the instructions for your choice

TO LOG DATA DIRECTLY TO A PRINTER

NAME OF FILE TO LOG TO: Type

 @LPT (for AOS, AOS/VS, and AOS/WS
 systems) or
 \$LPT (for RDOS and DGRDOS systems)

to specify the system printer as the file to log to. Instead of being saved on file, all data is printed

The system displays

```
+-----+  
| COMMUNICATIONS LOGGING IS ENABLED: xxxx |  
+-----+
```

where xxxx is the name of the file you are logging to

The cursor returns to the ENTER CHOICE prompt. Choose another option

TO LOG DATA TO A DISK FILE

NAME OF FILE TO LOG TO: Type the name of the file you want data to log to. The log file is created if it does not exist. Data is appended to an existing log file

The system displays

```
+-----+  
| COMMUNICATIONS LOGGING IS ENABLED: xxxx |  
+-----+
```

where xxxx is the name of the file you are logging to

The cursor returns to the ENTER CHOICE prompt. Choose another option

DISABLE COMMUNICATIONS LOGGING

This option allows you to end an active logging session. When you end a logging session, no more data is sent to the log file.

```
DG/GATE Revision 2.35
Main Menu
```

- 1. Maintain Phone Directory
- 2. Begin or Resume Remote Communications
- 3. End Remote Communications
- 4. Enable Communications Logging
- 5. Disable Communications Logging
- 6. Transfer a File
- 7. Use Local CLI
- 8. DG/GATE Information
- 9. Exit DG/GATE

```
Enter choice: 5
```

```
Remote communications is inactive.
Communications logging is enabled: FILE1
```

ENTER CHOICE:

Type the option number to DISABLE
COMMUNICATIONS LOGGING. The system displays

```
+-----+
|   COMMUNICATIONS LOGGING IS DISABLED   |
+-----+
```

The cursor returns to the ENTER CHOICE
prompt. Choose another option

TRANSFER A FILE

NOTE!

Problems arise when files from one type of operating system are introduced to an incompatible operating system. Before being sent, files should always be reformatted to conform to the receiving operating system. If files are not reformatted, the receiving system must be able to reformat them using a text editor or utility program that changes incompatible characters to an acceptable format.

This option allows you to send files to a remote non-AOS, -AOS/VS, or -AOS/WS system (see Tips & Techniques for information on how to receive files from such a system). If the remote system is using AOS, AOS/VS, or AOS/WS, this option allows you to send or receive files.

IMPORTANT: File transfers differ depending upon the type of remote operating system you are communicating with.

To SEND a file to a non-AOS, -AOS/VS, or -AOS/WS system, prepare for file transfer (as outlined in the 3 steps below), then follow instructions for FILE TRANSFER WITHOUT PROTOCOL -- SEND.

To SEND or RECEIVE a file to or from an AOS, AOS/VS, or AOS/WS system, prepare for file transfer (as outlined in the 3 steps below), then follow instructions for FILE TRANSFER WITH PROTOCOL -- SEND OR RECEIVE.

=====

TO PREPARE FOR FILE TRANSFER

=====

File transfers are accomplished by a series of steps. Perform the following 3 steps to prepare for file transfer:

1. Choose the BEGIN OR RESUME REMOTE COMMUNICATIONS option from the DG/GATE Main Menu
2. Log on to the remote system
3. Move to the appropriate directory on the remote system

=====

FILE TRANSFER WITHOUT PROTOCOL -- SEND

=====

Issue whatever commands are appropriate to the remote system to create a new file. (You may be required to use a text editor.)

The remote system creates the file and is ready to receive text records

Press the interrupt sequence (default is the CTRL ^F15 key) to return to the DG/GATE Main Menu and select the TRANSFER A FILE option from the Main Menu

DG/GATE Revision 2.35
Transfer a file

1. Send disk file as keyboard input
2. Use file transfer protocol to send or receive a file

Enter choice: 1

ENTER CHOICE
(Transfer a File menu)

Select SEND DISK FILE AS KEYBOARD OUTPUT from the Transfer a File menu

LOCAL DELIMITER

1. NEWLINE
2. RETURN
3. OTHER

ENTER CHOICE:

NOTE: You must know what character the remote system recognizes as an end of record character. (Ask the System Manager of the remote system if you are not sure.)

Choose one of the following:

- . Type 1 to specify the NL character as the end of a record

- . Type 2 to specify the CR character as the end of a record
- . Type 3 to specify any other character as the end of a record

```

+-----+
| ENTER OCTAL VALUE IN RANGE 0-177: |
+-----+

```

Type the ASCII standard octal value for the character

REMOTE TRIGGER

1. NEWLINE
2. RETURN
3. CONTROL-Q
4. OTHER

ENTER CHOICE:

NOTE: You must know what the remote system sends as a signal that it is ready for another record. Ask the System Manager of the remote system.

Choose one of the following:

- . Type 1 to specify the NL character as the signal to send another record
- . Type 2 to specify the CR character as the signal to send another record
- . Type 3 to specify the control-Q sequence as the signal to send another record
- . Type 4 to specify any other character as the signal to send another record

```

+-----+
| ENTER OCTAL VALUE IN RANGE 0-177: |
+-----+

```

Type the ASCII standard octal value for the character

TAKE INPUT FROM WHICH DISK FILE?

Type the name of the file you want to transfer

ENTER THE NUMBER OF MILLISECONDS TO DELAY BETWEEN RECORDS (0-32767):
Default: 0

You may need to delay transmissions if the remote system cannot keep pace with the rate of data transmission. Type the number of milliseconds to delay between records

or

Press NL to use the default value

DO YOU WISH TO CONTINUE
WITH THIS FILE
TRANSMISSION? (Y/N)
Default: Y

Choose one of the following:

- . Press NL to continue. The system displays each line as it is transmitted. After the last line is transmitted you are returned to the remote system to the file you created

Append more text to the file by typing more text at the keyboard, or exit the text file

When you are ready to return to the DG/GATE Main Menu, press the interrupt sequence (default is CTRL ^F15). The Main Menu is displayed

- . Type N to discontinue the file transfer. No text is transferred and you return to the DG/GATE Main Menu

You may select any option

NOTE: If you select the BEGIN OR RESUME COMMUNICATIONS option now, you return to the file you created on the remote system. Append to the file by typing more text at the keyboard

or

Exit the text file

To return to the DG/GATE Main Menu, log off the remote CLI and press the interrupt sequence (default is CTRL ^F15), or, remain logged on to the remote computer and press the interrupt sequence. The Main Menu is displayed

=====

FILE TRANSFER WITH PROTOCOL -- SEND OR RECEIVE

=====

At the CLI prompt on the remote system press the interrupt sequence (default is the CTRL ^F15 key). Then select the TRANSFER A FILE option from the Main Menu

DG/GATE Revision 2.35
Transfer a file

1. Send disk file as keyboard input
2. Use file transfer protocol to send or receive a file

Enter choice: 2

ENTER CHOICE
(Transfer a File menu)

Select USE FILE TRANSFER PROTOCOL TO
SEND OR RECEIVE A FILE from the Transfer a
File menu

IS YOUR REMOTE HOST
AN AOS OR AOS/VS
SYSTEM? (Y/N)
Default: Y

Choose one of the following:

- . Press NL if the remote operating system is AOS, AOS/VS, or AOS/WS. The system displays a series of CLI commands that are sent to the remote computer
- . Type N if the remote operating system is not an AOS, AOS/VS, or AOS/WS

| THIS WILL WORK ONLY IF YOU ARE |
RUNNING AOS OR AOS/VS CLI.

DG/GATE returns you to the remote system.
You may

- . perform CLI functions
- . press the interrupt sequence
and return to the DG/GATE Main
Menu
- . log off the remote system

DO YOU WISH TO (S)END
FILES, (R)ECEIVE FILES,
OR (T)ERMINATE FILE
XFER?

Choose one of the following:

- . Type S to send a file to the remote
computer
- . Type R to receive a file from the remote
computer
- . Type T to terminate file transfer

Follow the instructions for your response

(S)END A FILE

ENTER THE NAME OF THE
FILE TO SEND (NEW LINE
IF DONE):

Type the name of the file you want to send.
The system confirms that the file is sent by
displaying the filename and the size of
each block of data in the file

Continue entering filenames to send

or

Press NL if you are finished sending files

(R)ECEIVE A FILE

ENTER THE NAME OF THE
FILE TO RECEIVE (NEW
LINE IF DONE):

Type the name of the file on the remote
system that you want to receive. The system
confirms that the file is received by
displaying the filename and the size of each
block of data in the file

Continue entering filenames to receive

or

Press NL if you are finished receiving files

(T)ERMINATE FILE TRANSFER

FILE TRANSFER FUNCTION
TERMINATING

DG/GATE returns you to the remote computer system. You are in the same directory you were in when you began the file transfer function

You may do any of the following:

- . perform CLI operations on the remote system
- . press the interrupt sequence (default is CTRL ^F15) to return to the DG/GATE Main Menu while maintaining a remote communication session
- . log off the remote system, then press the interrupt sequence

When you log off the remote system, the DG/GATE Main Menu is displayed

USE LOCAL CLI

This option allows you to use the local CLI (Command Line Interpreter) while running the DG/GATE program. When you are through using the CLI, you return to the DG/GATE program.

For AOS, AOS/VS, and AOS/WS systems, you see a screen similar to the one below:

```
+-----+
|       |
|       |
| Executing local CLI. |
| Use BYE command to return to GATE. |
|       |
| AOS/VS CLI  REV 04.01.00.00   15-FEB-85   13:47:11 |
| DG/Gate) |
|       |
+-----+
```

For RDOS and DGRDOS systems, you see a screen similar to this one:

```
+-----+
|       |
|       |
| Executing local CLI. |
| Use POP command to return to GATE. |
|       |
| R |
|       |
+-----+
```

DG/GATE displays the local operating system's identification, revision number, date, and time

The system also displays the CLI prompt running under DG/GATE:

RDOS, DGRDOS	AOS, AOS/VS, and AOS/WS
+-----+	+-----+
R	DG/GATE)
.	.
.	.
.	.
+-----+	+-----+

Perform any CLI functions

Type BYE (for AOS, AOS/VS, and AOS/WS systems) or POP (for RDOS and DGRDOS systems) to return to the DG/GATE Main Menu

DG/GATE INFORMATION MENU

This option allows you to view information for DG/GATE functions, switches, configuration dialogues, cable connections, and modem switch settings.

DG/GATE Revision 2.35
Information Menu

- | | |
|------------------------------------|------------------------------------|
| (1) Maintain Phone Directory | (18) /P switch (phone directory) |
| (2) Begin or Resume Communications | (19) /S switch (rotary selection) |
| (3) End Remote Communications | (20) /N switch (no menu displayed) |
| (4) Enable Communications Logging | (21) /T switch (rotary trips) |
| (5) Disable Communications Logging | (22) /I switch (activity monitor) |
| (6) File Transfer Without Protocol | (23) Modem connection |
| (7) File Transfer With Protocol | (24) Direct RS232-C connection |
| (8) Use Local CLI | (25) Direct RS422-A connection |
| (9) Exit DG/GATE | (26) Direct 20mA connection |
| (10) Multiplexor support | (27) Remote system configuration |
| (11) Modem support | (28) DGRDOS - SYSGEN and CONFIG |
| (12) Local echo | (29) RDOS --- SYSGEN |
| (13) Terminal types | (30) AOS/WS - CONFIGURE and AOSGEN |
| (14) Extended pass-through | (31) AOS ---- AOSGEN |
| (15) Keyboard interrupt sequence | (32) AOS/VS - VSGEN |
| (16) Flow control (CONTROL-S & Q) | (33) Phone Directory conversion |
| (17) Lexis/Nexis Connection | |

Please choose one (ESC to return to main menu):

PLEASE CHOOSE ONE:

Type the number of the topic you want to view. Use the up and down arrow cursor control keys to scroll information screens or to return to the information menu

or

When you are finished viewing information topics, press ESC to return to the Main Menu

EXIT FROM DG/GATE

This option terminates the DG/GATE program and returns you to the local CLI.

NOTE: Be sure to log off the remote computer system before you exit DG/GATE. Then press the interrupt sequence (default is CTRL ^F15) to return to the DG/GATE Main Menu. (You are automatically logged off the remote computer only when you are using a modem and exit DG/GATE without logging off.)

```
+-----+
|                                             |
|               DG/GATE Revision 2.35       |
|                Main Menu                  |
|                                             |
|  1. Maintain Phone Directory              |
|  2. Begin or Resume Remote Communications |
|  3. End Remote Communications            |
|  4. Enable Communications Logging         |
|  5. Disable Communications Logging       |
|  6. Transfer a File                      |
|  7. Use Local CLI                        |
|  8. DG/GATE Information                  |
|  9. Exit DG/GATE                         |
|                                             |
|      Enter choice: 9                     |
|                                             |
|      Exit DG/GATE? (Y/N) Y               |
|                                             |
| Remote communications is inactive.        |
| Communications logging is disabled.      |
|                                             |
+-----+
```

EXIT DG/GATE? (Y/N)
Default: Y

Choose one of the following:

- Press NL to exit DG/GATE. The system returns you to the local CLI prompt

NOTE: If a communications session is in progress the system displays

```
+-----+
| END COMMUNICATIONS AND EXIT              |
| DG/GATE? (Y/N)                          |
+-----+
```

Type Y to exit DG/GATE and return to the local CLI prompt

or

Type N to keep the session active
and return to the DG/GATE Main
Menu

- Type N if you want to continue using
DG/GATE. The system returns you to the
DG/GATE Main Menu

TIPS AND TECHNIQUES

TO RECEIVE FILES FROM A REMOTE NON-AOS, -AOS/VS, OR -AOS/WS SYSTEM

First you must enable communications logging. Then, choose the BEGIN OR RESUME REMOTE COMMUNICATIONS option and log on to the remote system. Move to the directory on the remote system where the file of your choice resides.

Type whatever command is appropriate for the remote system to allow you to view the file of your choice.

As the file is displayed, the text is logged to a disk file on your system.

After the file is displayed, return to the DG/GATE Main Menu and disable communications logging. Then you may go to the local CLI and view, edit, or print the logfile containing the text received from the remote system.

DATA LOGFILE PRINT

REMEMBER: The print file must contain printable characters that are compatible with your operating system.

To print the logfile go to the DG/GATE Main Menu.

From the DG/GATE Main Menu, choose the USE LOCAL CLI option or EXIT DG/GATE option to return to the local CLI.

At the local CLI prompt, type the following CLI command:

```
for AOS, AOS/VS --> |-----+
and AOS/WS systems |QPRINT logfile name|
                    |-----+

for RDOS and      --> |-----+
DGRDOS systems    | PRINT logfile name|
                    |-----+
```

where logfile name is the name of the file you logged data to. The logfile is printed at the system printer.

DATA LOGFILE VIEW

To view the logfile go to the DG/GATE Main Menu.

From the DG/GATE Main Menu, choose the USE LOCAL CLI option or EXIT DG/GATE option to return to the local CLI.

At the local CLI prompt, type the following CLI command:

TYPE logfile name

where logfile name is the name of the file you logged data to.

NOTE: Your logfile is equivalent to any other text file in the directory and can be manipulated or printed in the same way.

OUTPUT FLOW CONTROL

If the remote communication line is on a DG computer and is not generated for output flow control, you may set flow control after you log on the the remote system. Type

CHAR/ON/OFC

at the remote CLI prompt. Once you log off the remote system the line returns to its original characteristics.

Turn output flow control on ONLY when you want to function as a terminal on the remote system. Do NOT turn output flow control on when you want to transfer a file.

REMINDERS

- . If the remote system is operating under AOS, AOS/VS, or AOS/WS, the communications line on the remote system should be
 - . under control of EXEC
 - . enabled for logging on
- . The following line attributes should be the same for your local system and the remote system:
 - . line speed (baud rate)
 - . number of data bits
 - . number of stop bits
 - . interface type (modem, RS232-C, RS422-A, or Current Loop)
- . For file transfer the following configurations are recommended:
 - . 8 data bits
 - . no parity
 - . "flow control" OFF (when file transfer is to be used)
- . Since file transfer is not supported for non-Data General remote systems, it is unnecessary to restrict non-Data General remote systems to "no parity."

LEXIS/NEXIS

You may use DG/GATE to access data from the LEXIS or NEXIS subscription information services.

LEXIS is a computer-assisted legal research tool and provides users with fast and economical access to thousands of legal papers.

NEXIS is a computer-assisted information service that enables users to access text in newspapers, magazines, newswires, and reference works to obtain background or current information on a variety of subjects.

How to Subscribe to LEXIS/NEXIS

For information on subscribing to the LEXIS or NEXIS information retrieval services, write to

Mead Data Central
P. O. Box 1830
Dayton, OH 45401
1-800-227-4908

Function Keys

A chart of LEXIS/NEXIS function keys is included in Appendix C. A blank template is also provided for your convenience.

How to Log On the LEXIS/NEXIS Network

To log on to the LEXIS/NEXIS network, choose the appropriate DG/GATE phonebook entry (or create one if it does not exist--see Appendix C for phonebook entry parameters for LEXIS/NEXIS). Once you choose the phonebook entry for LEXIS/NEXIS, the system displays

NOW DIALING THE NUMBER...
CONNECT 1200

After the system displays the LEXIS/NEXIS logon message, you should identify your terminal as .DATGEN.

See LEXIS/NEXIS documentation for operating instructions.

Appendix



APPENDIX A

ERROR MESSAGES

CALLER NOT PRIVILEGED FOR THIS ACTION

You are not allowed to take this action at this time. Choose another option.

INVALID RESPONSE - ENTER Y OR N ONLY

You typed something other than Y or N. Type Y or N.

PLEASE ENTER A NUMBER FROM 1-9 INCLUSIVE

You typed a number other than 1, 2, 3, 4, 5, 6, 7, 8, or 9. Type a number from 1-9 inclusive.

THIS FILE CANNOT BE FOUND ON THE LOCAL SYSTEM

You typed the name of a file that does not exist. Type another filename.

YOU CANNOT USE FILE TRANSFER UNLESS YOU HAVE AN ACTIVE SESSION

You tried to use the file transfer option before making a connection with a remote computer. Establish a connection with the remote computer and log on to the remote system before you try to transfer files.

YOU HAVE NO ACTIVE SESSION TO TERMINATE

You tried to terminate communications with a remote machine. You have no communication session to end. Choose another option.



APPENDIX B

GLOSSARY

AOS. Data General's Advanced Operating System.

AOS/VS. Data General's Advanced Operating System with Virtual Storage.

AOS/WS. Data General's Advanced Operating System Work Station.

ASYNCHRONOUS COMMUNICATION. A method of transmission that relies upon an exchange of signals to indicate when data is offered by one device and taken by another and to indicate the byte organizations of the data stream.

AUTO-DIAL MODEM. A modem that automatically dials the remote system.

BAUD. The rate at which signals are transmitted over a given channel, usually measured in the number of signals per second.

BIT. A binary digit.

CLI. The Command Line Interpreter, an interactive program that acts as the primary interface between the user and the operating system.

CONFIGURATION. A set of interconnected equipment forming a computer system.

CONFIGURE. To give a configuration to; to plan and define your computer equipment.

DEDICATED LINE. An asynchronous line that links specific computers.

DGRDOS. Desktop Generation Realtime Disk Operating System.

DIRECT LINE. A line consisting of a cable directly connected to another computer without using modems or telephone lines.

DIRECTORY. A file that contains other files and directories (sub-directories). Each directory functions as a reference point for locating files.

ECHOING. The process of sending back to the CRT screen the same characters that were typed at the console. Some systems echo characters from the CPU. Some systems are designed so that the CRT echoes the characters (this is called local echoing).

EMULATE. The use of programming techniques and special machine features to permit a computing system to execute programs written for another system.

FILE TRANSFER. A DG/GATE function that allows you to send files to a remote system or receive files from a remote system.

FILENAME. The alphanumeric string that identifies a file. The maximum allowable length of the string varies with the operating system.

GENERATE. To define and bring into existence in computer memory, communications lines used to connect computer equipment.

INTERRUPT SEQUENCE. A sequence of characters that signals DG/GATE to suspend current processing and return to the DG/GATE Main Menu.

LINE ATTRIBUTES. Communication line characteristics which include stop bits, parity, baud rate, and modem type.

LOAD. To put into computer memory the programs and files that perform tasks.

LOCAL SYSTEM or COMPUTER. The system from which you are running DG/GATE.

LOGGING. A DG/GATE function that writes all characters received from the remote computer to a disk file or directly to a printer.

MODEM. A contraction of modular/demodulator. A modem is a device that enables computers and terminals to communicate over telephone lines.

MULTIPLEXOR. A hardware device that allows handling of multiple signals over a single channel.

PATCH. (1) A temporary electrical connection. (2) To make an improvised modification; to change a software routine in a rough or expedient way.

RDOS. Data General's Real Time Disk Operating System.

REMOTE SYSTEM or COMPUTER. The system with which you establish a connection.

SLAVE. The portion of code which resides in the remote system and communicates with the File Transfer code in your local system.

APPENDIX C

LEXIS/NEXIS

Phonebook Entry

Below is a sample phonebook entry suitable for connecting to LEXIS/NEXIS:

Multiplexor type (U or A): U
Console number (0-255): @conx (where x is the line number)
Baud Rates Available: 0=AOS/VS default, 1=110, 2=300,
3=600, 4=1200, 5=2400, 6=4800, 7=9600
Which baud rate should be used? 4
Parity (0=None, 1=Odd, 2=Even, 3=Mark): 2
Is the line connected to a modem? (Y/N) Y
Is it an auto-dial modem? (Y/N): Y
Enter 1-39 character telephone number: T1,404,5210515

NOTE: If you have a pulse dial phone, enter P.
Enter T for a touchtone phone. The phone
number you enter should be for your local
LEXIS/NEXIS connection and can be for a
carrier other than your preferred carrier.

Use local echo when communicating? (Y/N): Y
Available terminal types:
1=DG standard, 2=ANSI, 3=TTY, 4=LEXIS NEXIS
Which terminal type should be used? 4
Enter octal keyboard interrupt sequence: 036040
Send CNTL S/Q to host? (Y/N): N
Enter 1-30 character name for online phone directory: LEXIS/NEXIS
connection

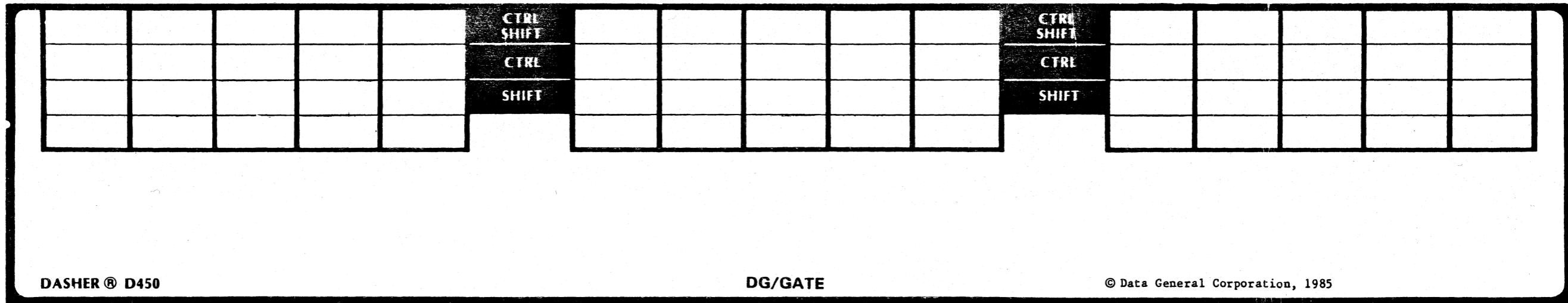
Function Keys

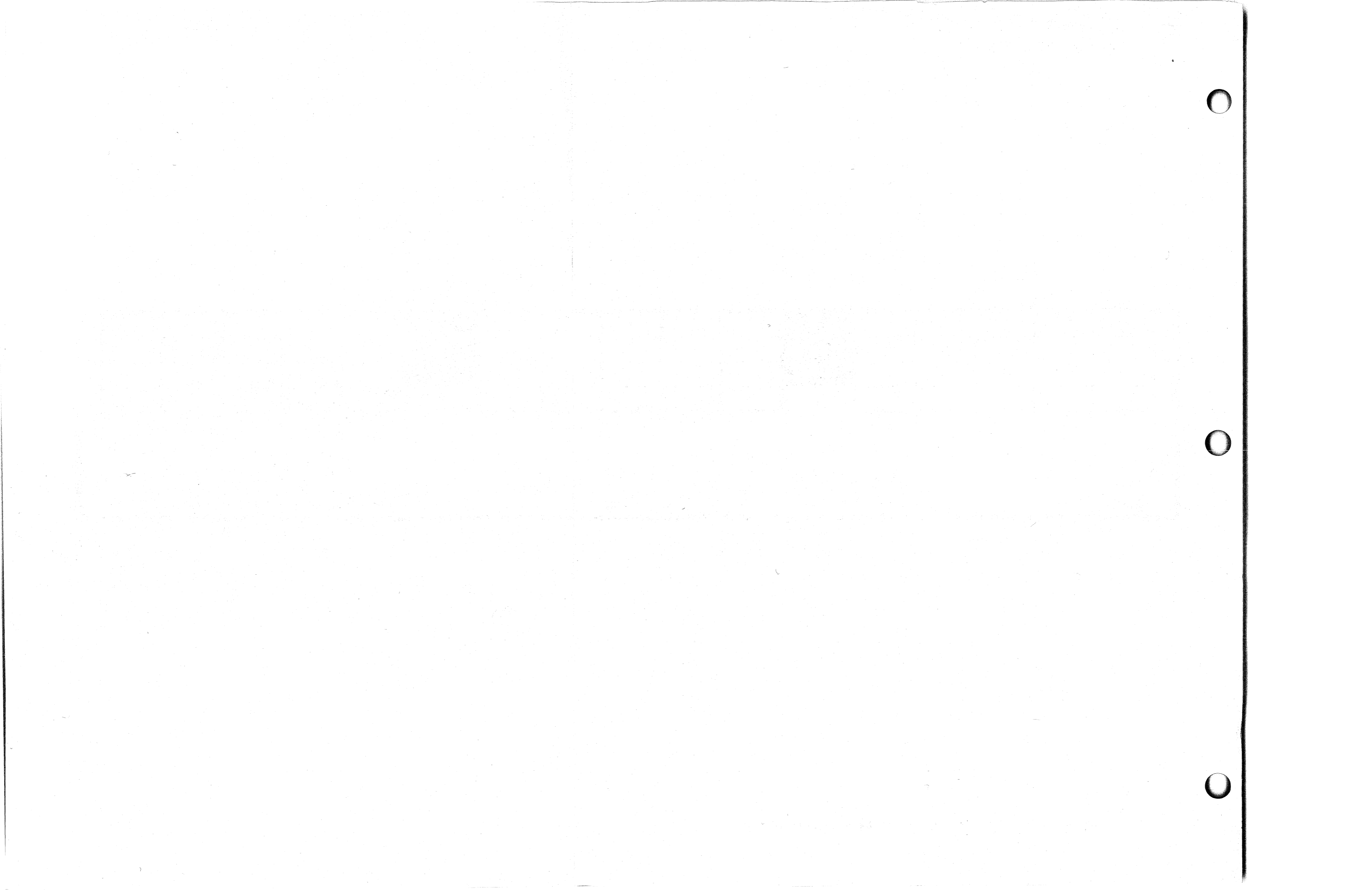
While you are communicating with LEXIS/NEXIS, the function keys on your terminal assume the following keyboard assignments:

Function Key -----	Function -----	Keystroke Equivalent/Suffix -----
CR	TRANSMIT	N/A
F11	STOP	N/A
Control Shift F15	INTERRUPT SEQUENCE	N/A

F01	PREVIOUS DOC (PREV DOC)	.PDn (skip n* documents backward)
Shift F01	FIRST DOC	.FD
F02	NEXT DOC	.NDn (skip n documents forward)
Shift F02	PRINT DOC	.PR
F03	PREVIOUS PAGE (PREV DOC)	.PPn (skip n pages backward)
Shift F03	FIRST PAGE	.FP
F04	NEXT PAGE	.NPn (skip n pages forward)
Shift F04	SCREEN PRINT	.SP
F05	MAIL-IT	.MI
F06	FULL	.FU
F07	KEY WORD IN CONTEXT (KWIC)	.KW
F08	VAR KWIC	.VKn (specifies n words of context to flank key word in text)
F09	CITE	.CI
F10	SEGMENTS (SGMTS)	.SE
Shift F11	SIGN OFF	.SO
F12	CHANGE LIBRARY (CHG LIB)	.CL
F13	CHANGE FILE (CHG FILE)	.CF
F14	NEW SEARCH	.NS
Shift F14	DIFFERENT LEVEL (DIF LEVEL)	.DLn (specifies search level n)
F15	SELECT SERVICE	.SS
Shift F15	EXIT SERVICE	.ES

*n indicates desired quantity (1-999); not required.





APPENDIX D

FILE TRANSFER PROTOCOL DESCRIPTIONS

FTA SLAVE INITIATION SEQUENCE

GATE control side	AFTSLAVE side	Comments
"X AFTSLAVE", etc.		CLI command to ?PROC SLAVE.
	X AFTSLAVE, etc.	Echo of CLI command.
	ACK	Tell GATE that ?PROC worked. The slave now waits for a single-letter command. Note: If GATE does not get ACK character within 15 seconds of sending the X AFTSLAVE command, then GATE assumes that slave will never come up and returns to main menu.

"SEND" SEQUENCE - When user wants to send a file and that file does not exist on the remote system

GATE control side	AFTSLAVE side	Comments
"R"		Since GATE side needs to send a file, tell AFTSLAVE to get ready to receive a file. The "R" indicates "Receive".
	ACK	Tell GATE "R" was received.
"<filename_length>"		Tell slave how long the filename block is.
	ACK	Tell GATE the length byte was received.
filename + checksum		Send filename + checksum to the slave.
	ACK	Tell GATE the filename and a valid checksum were received.
	ACK	Tell GATE that no file with this name exists on the slave side system.
4-byte fstat packet		Send file information packet to the slave.
	ACK	Tell GATE the packet was received.
	ACK	Tell GATE side that a suitable file has been created and opened on the slave side.
Data block#1 length		Send length of data block number 1.
	ACK	Tell GATE the length word was received correctly.
Data block#1 plus checksum.		Send data block number 1 to slave side.

	ACK	Tell GATE valid data block plus a valid checksum were received.
	ACK	Tell GATE the data block was successfully written to the file on the slave side.
Data block#2 length		Send length of data block number 2.
	ACK	Tell GATE the length word was received correctly.
Data block#2 plus checksum.		Send data block number 2 to slave side.
	ACK	Tell GATE a valid data block plus a valid checksum were received.
	ACK	Tell GATE the data block was successfully written to the file on the slave side.
.	.	.
.	.	.
.	.	.
Last data block length		Send length of the last data block.
	ACK	Tell GATE the length word was received correctly.
Last data block plus checksum.		Send last data block to the slave side.
	ACK	Tell GATE a valid data block plus a valid checksum were received.
	ACK	Tell GATE the data block was successfully written to the file on the slave side.
Send zero length word.		Tell slave end-of-file has been reached.
	ACK	Acknowledge end-of-file.

"SEND" SEQUENCE - When user wants to send a file, but that file already exists on the remote system. The user decides not to send the file.

GATE control side	AFTSLAVE side	Comments
"R"		Since GATE side wishes to send a file, tell AFTSLAVE to get ready to receive a file. The "R" indicates "Receive".
	ACK	Tell GATE "R" was received.
"<filename_length>"		Tell slave how long the filename block is.
	ACK	Tell GATE the length byte was received.
filename + checksum		Send filename + checksum to the slave.
	ACK	Tell GATE the filename and a valid checksum were received.
	NAK	Tell GATE that a file with this name exists on the slave side system.
NAK		When informed of this, the user decides not to delete the remote file. GATE tells slave to abort the "R" request issued earlier and to wait for another command.

"SEND" SEQUENCE - When user wants to send a file, but that file already exists on the remote system. The user decides to delete the remote file and then initiate file transfer.

GATE control side	AFTSLAVE side	Comments
"R"		Since GATE side wishes to send a file, tell AFTSLAVE to get ready to receive a file. The "R" indicates "Receive".
	ACK	Tell GATE "R" was received.
"<filename_length>"		Tell slave how long the filename block is.
	ACK	Tell GATE the length byte was received.
filename + checksum		Send filename + checksum to the slave.
	ACK	Tell GATE the filename and a valid checksum were received.
	NAK	Tell GATE that a file with this name exists on the slave side system.
ACK		The user, when informed of this, decides that he wants to delete the remote file. GATE tells the slave to go ahead and delete the file.
	ACK	Tell GATE the file has been deleted — ready to receive new file contents. A "NAK" here indicates that the slave was unable to delete the file.
4-byte fstat packet		Send file information packet to the slave.
	ACK	Tell GATE side the packet was received.

	ACK	Tell GATE side that a suitable file was successfully created and opened on the slave side.
Data block#1 length		Send length of data block number 1.
	ACK	Tell GATE the length word was received correctly.
Data block#1 plus checksum.		Send data block number 1 to slave side.
	ACK	Tell GATE a valid data block and a valid checksum were received.
	ACK	Tell GATE the data block was successfully written to the file on the slave side.
Data block#2 length		Send length of data block number 2.
	ACK	Tell GATE the length word was received correctly.
Data block#2 plus checksum.		Send data block number 2 to slave side.
	ACK	Tell GATE a valid data block and a valid checksum were received.
	ACK	Tell GATE the data block was successfully written to the file on the slave side.
.	.	.
.	.	.
.	.	.
Last data block length		Send length of the last data block.
	ACK	Tell GATE the length word was received correctly.
Last data block plus checksum.		Send last data block to the slave side.

	ACK	Tell GATE a valid data block and a valid checksum were received.
	ACK	Tell GATE the data block was successfully written to the file on the slave side.
Send zero length word.		Tell slave end-of-file has been reached.
	ACK	Acknowledge end-of-file.

"RECEIVE" SEQUENCE - When user wants to receive a file, and that file does exist on the remote system.

GATE control side	AFTSLAVE side	Comments
"s"		Since GATE side wishes to receive a file, tell slave to get ready to send us a file. The "S" indicates "Send".
	ACK	Tell GATE "S" was received.
"<filename_length>"		Tell slave how long the filename block is.
	ACK	Tell GATE the length byte was received.
filename + checksum		Send filename + checksum to the slave.
	ACK	Tell GATE the filename and a valid checksum were received.
	ACK	Tell GATE that a file with this name exists on the slave side system.
	ACK	Tell GATE that filestatus info for this file was obtained. A "NAK" is sent if filestatus info is not obtained.
	ACK	Tell GATE that the file is open. A "NAK" is sent if the file cannot be opened.
	4-byte fstat packet	Send file information packet to the GATE.
ACK		Tell slave side that the packet was received.
ACK		Tell slave side that a suitable file has been successfully created and opened on the GATE side.

	Data block#1 length	Send length of data block number 1.
ACK		Tell slave the length word was received correctly.
	Data block#1 plus checksum.	Send data block number 1 to GATE side.
ACK		Tell slave that a valid data block and a valid checksum were received.
ACK		Tell GATE the data block was successfully written to the file on the GATE side.
	Data block#2 length	Send length of data block number 2.
ACK		Tell slave the length word was received correctly.
	Data block#2 plus checksum.	Send data block number 2 to GATE side.
ACK		Tell slave valid data block and valid checksum were received.
ACK		Tell GATE data block was successfully written to the file on the GATE side.
.	.	.
.	.	.
.	.	.
	Last data block length	Send length of the last data length.
ACK		Tell slave the length word was received correctly.
	Last data block plus checksum.	Send the last data block to the GATE side.
ACK		Tell slave valid data block and checksum were received.

ACK		Tell GATE data block was successfully written to the file on the GATE side.
	Send zero length word.	Tell GATE end-of-file has been reached.
ACK		Acknowledge end-of-file.

"RECEIVE" SEQUENCE - When user wants to receive a file, and that file does not exist on the remote system.

GATE control side	AFTSLAVE side	Comments
"s"		Since GATE side wishes to receive a file, tell slave to get ready to send us a file. The "S" indicates "Send".
	ACK	Tell GATE "S" was received.
"<filename_length>"		Tell slave how long the filename block is.
	ACK	Tell GATE the length byte was received.
filename + checksum		Send filename + checksum to the slave.
	ACK	Tell GATE the filename and a valid checksum were received.
	NAK	Tell GATE that a file with this name does not exist on the slave side system.

FTA SLAVE TERMINATION SEQUENCE

GATE control side	AFTSLAVE side	Comments
"B"		Tell slave to ?TERM itself.

Filename packet:

The filename packet used by GATE is variable in length; the length of the packet depends on the length of the filename being transmitted.

The layout or format of the packet is:

Byte 1	Bytes "2" through "n"	Byte "n+1"
Length of filename (checksum is not included)	Filename or pathname string. No terminating null is included.	Checksum calculated for bytes "2" through "n".

The checksum byte is formed by adding up the characters of the filename or pathname string, modulo 256.

Filestatus packet:

The filestatus packet used by GATE is abbreviated; it is four bytes in length, and no checksum is used when the packet is transmitted from one system to another.

The layout or format of the packet is:

Byte 1	Byte 2	Byte 3	Byte 4
Null	AOS file type (must be >= ?FUDF)	File element size	

File data block:

The file data block used by DG/GATE

The layout or format of the block is:

Byte 1	Byte 2	Byte 3	Byte 4	Byte 5	Byte 2N+2	Byte 2N+3	Byte 2N+4	Byte 2N+5	Byte M-1	Byte M	
Len_Hi	Len_Low	"N"	Pos_1	Num_1	Pos_N	Num_N	<x>	<y>	<z>	Checksum

Here, "N" is the number of compressions performed by INFOS. The checksum byte at the end is the sum of the bytes in the block (not including length bytes) modulo 256, and ANDed with 376 octal. This format allows WITS compatibility.



INDEX

A

AOS
 and hardware connection methods 15
 and remote system configuration 7
 DG/GATE Installation 20, 25
AOS/VS
 and hardware connection methods 15
 and remote system configuration 7
 DG/GATE Installation 20, 27
AOS/WS
 and hardware connection methods 10
 and remote system configuration 7
 DG/GATE Installation 20, 21
Asynchronous data transmission ii

B

Baud rate iii
Bits iii
BREAK ESCape key 35

C

Cabling 6
 Current loop 14, 19
 Modem (indirect) 10, 15
 RS232-C 12, 17
 RS422-A 13, 18
CLI
 Use Local 59
Communications line 3, 5, 7
 Generate local
 AOS 25
 AOS/VS 27
 AOS/WS 21
 DGRDOS 23
 RDOS 29
 Remote 7
Communications logging
 Disable 51
 Enable 49
 To a disk file 50
 To a printer 49
 To receive a file 63

Configuration

Hardware 9
Remote system 7

Connection

Choosing the connection 6
Current loop 14, 19
Modem (indirect) 10, 15
RS232-C 12, 17
RS422-A 13, 18
CPU 4
CR key 35

D

DGRDOS

and hardware connection methods 10
DG/GATE Installation 20, 23

DG/GATE

How to execute 36
Using switches 36
Main Menu 38
Information menu 60
Exit from 61
Disk storage 5
Dow Jones News/Retrieval vi

E, F

ESC key 35

Features vi

File transfer 52
Receive 56, 57, 63
Send 53, 56
Terminate 58
With protocol 56
Without protocol 53

Flow control iii, 7
Output 64

Format

Communications line iii

Forms

DG/GATE Installation 8
Blank template C.3

Framing iii

Function keys

Default 35
LEXIS/NEXIS 66, C.1

G, H, I

General Operating Instructions 35

Hayes SMARTMODEM vi

Switch settings 11, 16

Installation

DG/GATE AOS 25

DG/GATE AOS/VS 27

DG/GATE AOS/WS 21

DG/GATE DGRDOS 23

DG/GATE RDOS 29

Form 8

Prerequisites 3

Interrupt sequence 35

and 6053 terminals 35

Re-define 42

Introduction iv

J, K, L

LEXIS/NEXIS iv, vi, 66

Function keys C.1

Phonebook entry for C.1

Local echo option vi, 42

Logfile

Print 63

View 64

Logging

Disable communications 51

Enable communications 49

To a disk file 50

To a printer 49

To receive a file 63

M, N, O

Modems 4, 6

AOS, AOS/VS, or RDOS cabling 15

AOS/WS or DGRDOS cabling 10

Hayes SMARTMODEM 11, 16

NEW LINE key 35

Operating system 4
AOS DG/GATE installation 25
AOS/VS DG/GATE installation 27
AOS/WS DG/GATE installation 21
DGRDOS DG/GATE installation 23
RDOS DG/GATE installation 29
Preparing 20

P

Parity iii
Phone directory
Add an entry 40
Change an entry 45
Delete an entry 44
List entries 45
Maintain 39
Preface i
Program memory 3, 5

Q, R, S

RDOS
and hardware connection methods 15
DG/GATE Installation 20, 29
Remote communications iii
Begin 46
End 48
Resume 46, 47
Remote system configuration 7
Switches 36

T, U, V

Terminal 4
DG 6053 4, 35
Transmission channel ii
User program memory 5
Using AOS, AOS/VS, or RDOS
Hardware configurations 15
Using AOS/WS or DGRDOS
Hardware configurations 10

W, X, Y, Z

Data General Users group

Installation Membership Form

Name _____ Position _____ Date _____

Company, Organization or School _____

Address _____ City _____ State _____ Zip _____

Telephone: Area Code _____ No. _____ Ext. _____

1. Account Category

- OEM
 End User
 System House
 Government

5. Mode of Operation

- Batch (Central)
 Batch (Via RJE)
 On-Line Interactive

2. Hardware

M/600
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 Commercial ECLIPSE
 Scientific ECLIPSE
 Array Processors
 CS Series
 NOVA®4 Family
 Other NOVAs
 microNOVA® Family
 MPT Family

Qty. Installed	Qty. On Order

Other _____
 (Specify) _____

6. Communication

- HASP X.25
 HASP II SAM
 RJE80 CAM
 RCX 70 XODIAC™
 RSTCP DG/SNA
 4025 3270
 Other

Specify _____

7. Application Description

○ _____

3. Software

- AOS RDOS
 AOS/VS DOS
 AOS/RT32 RTOS
 MP/OS Other
 MP/AOS

Specify _____

8. Purchase

From whom was your machine(s) purchased?

- Data General Corp.
 Other
 Specify _____

4. Languages

- ALGOL BASIC
 DG/L Assembler
 COBOL FORTRAN 77
 Interactive FORTRAN 5
 COBOL RPG II
 PASCAL PL/1
 Business APL
 BASIC Other

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Are you interested in joining a special interest or regional Data General Users Group?

○ _____

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FOLD

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TAPE

FOLD

FOLD



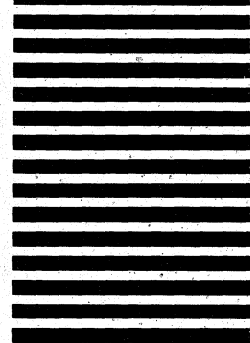
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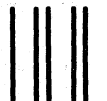
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 Reference Operating Guide _____

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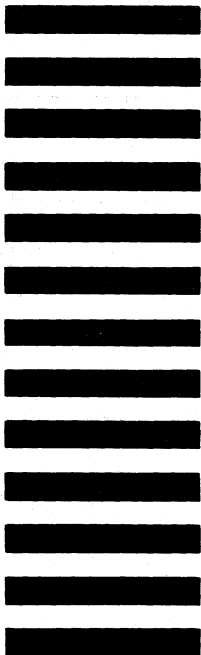
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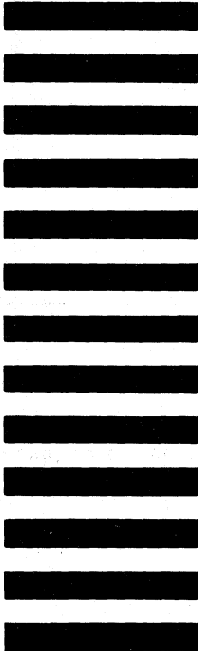
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