

# Comm-Stor™

the name says it all—  
storage for  
RS-232 Communications Systems  
by Sykes





### **Comm-Stor™**

Comm-Stor™ is a communications storage unit which uses an IBM compatible flexible disk drive. The unit is RS-232 compatible and interfaces directly with all asynchronous RS-232 terminals, printers and modems. The basic unit is structured for ASCII code.

Comm-Stor is a microprocessor based system which uses a message (file) oriented Directory for flexibility in storing and retrieving data.

Each message entered at the terminal is stored as a separate entry on the disk. A message identifier or "name," specified by the operator at time of message entry, is placed in the Directory on the disk. *All future references to this entry are made through this message name.*

This unit will respond to commands from either the terminal or modem ports, and is operator configurable to specific system parameters such as English (or foreign) language commands, special codes, command set, control functions and RS-232 interface parameters.

#### **Some of the main features of the unit are:**

- User Configurable
- Message Structured System
- Directory Listing of Messages
- High Speed Random Message Search
- High Capacity (See Specifications)
- English Language Commands
- Alpha or Sequential Sort
- Full Message Editing
- Forms Operations
- Printer Port
- Up to 9600 Baud Operation
- Single or Dual Unit

**Anyone Who Can Type Can Use Comm-Stor** With Comm-Stor, the operator uses a terminal to compose text messages or special data files, assign message names and store the messages.

The operator can also store messages received via a modem from a remote device such as a computer or another Comm-Stor unit. These messages can be assigned names either by the operator or the remote message source. Each floppy disk contains a directory of the message names to allow random retrieval of the messages. These message names can be any combination of alphanumeric characters up to 20 characters. In addition, the numeric portion of the message name can be automatically incremented by Comm-Stor so that each message will be sequentially numbered, e.g., page or part number. Each message name can also be assigned an extension of up to 8 characters, such as the date, message type, or operator initials for further identification.

**The Key to Our System Is Our Directory** Our Directory simplifies message retrieval operations. The operator may list the Directory in sequential or alphabetical order. In addition to specifying individual messages, the operator can also specify a group of messages to be displayed, printed or sent to a remote location via a modem. Sequentially or alphabetically sorted groups are specified by entering the first and last message names in the group. Groups may be more accurately defined by including the extension or specifying only the extension.

**Comm-Stor Speaks English . . . or German . . . or French . . .** Commands are entered by typing a special character (usually a period) followed by a one- or two-character abbreviation for an English language command, and the message name(s), where applicable. All commands are terminated by the End Of Line character, usually a carriage return. For a dual-drive unit, the number 2 is added to the command to specify the second disk.

An example of a command would be:

. E2 Brown, John

The period (.) indicates a command. The E signifies that a new message is to be Entered. The 2 indicates disk 2 will store the message and Brown, John is the name the operator wishes to assign to the newly entered message.

Additional information and examples of the more important operator commands are listed below.

**Enter** . E Jones, R. F.

With this command, the operator Enters a new message with the name Jones, R. F. The operator may also establish an automatic incrementing message name where the initial message name is X <initial value> Y, X and Y are optional alphanumeric strings, and the initial value is a number assigned to the first message. Now the operator can perform an Enter Automatic by typing . EA and the unit will automatically assign the message name X#Y, where # represents the incrementing portion of the current message number.

**Directory** The unit keeps a directory of all message names on the disk. As new messages are entered, their names are added to the Directory and when they are deleted, their names are removed from the Directory. The operator may display the entire Directory or portions of the Directory, either in the sequence in which they reside in the Directory (sequential mode), or in alphabetical order.

As an example, one might use the Display Directory command to list all message names starting with SMITH by setting the message name limits as SMITH and SMITHA, where SMITHA is the next alphabetical name after SMITH. The entry would be . DD SMITH/SMITHA and the results might be: SMITH, JOHN; SMITH, NANCY; SMITH, P. R.

**Display** . D PN10027

This command instructs Comm-Stor to Display the message named PN10027 on the local terminal. Multiple messages are displayed by entering the first and last message names as they appear in the Directory. Messages may be displayed in sequential or alphabetical order.

**Copy** The operator may copy selected messages or an entire disk from one drive to another in a dual-drive unit, or from one Comm-Stor to another via a modem.

**Print (Option)** . P PO11357

With the Print option, this entry will take the message PO11357 and print it on the local printer. The operator may also print multiple messages by entering the first and last directory entries, separated by a slash (/).

**Binary (Option)** The unit is capable of storing special messages such as computer data files, binary data, BCD, etc. Whereas normal messages have special message terminating characters, binary files often contain these terminating characters in the middle of a message, or cannot be terminated with these special characters. To circumvent this problem, a Binary Mode switch is provided so the operator can enter and exit the binary mode manually.

**Send** . S RFQ1710

The operator can use this command to Send RFQ1710 to a remote system via a modem. Messages grouped either sequentially or alphabetically can be sent by specifying the first and last message names.

**Receive** . R 9231P

This command allows the operator to assign the name 9231P to a message Received from a remote system via a modem and to store that message.

**Monitor** When messages are transferred between the disk and a remote system via a modem, the operator may also display these messages, if desired, on the local terminal with the monitor feature.

**Edit** The basic system includes character delete and line cancel features. An optional edit package includes a message editing feature where the entire message is held in a local buffer for editing. The system assigns line numbers to each line so the operator can specify a line number or group of lines when performing an edit operation. The operator can list one line, a contiguous group of lines or an entire message, either with or without the line number. The operator can delete or replace one or more lines and insert new lines in a message. New information may also be appended to a message. Character string searches are possible by simply entering the string. The unit then displays lines containing this string. After editing a message, the operator can assign a message name and save the message. If desired, the operator can delete the entire buffer and generate a new message, or change the previous message and save it with a new message name. This feature is especially useful when generating form letters with different addressees.

An example of an edit operation is:

; I5

First new line

Second new line

The semicolon specifies an edit command follows. The I specifies an Insert command and the 5 designates the line number. The "First new line" will become line 5 and the "Second new line" will become line 6. The old line 5 will now become line 7. Edit commands are:

*Basic System:*

BS Character Delete

CAN Line Cancel

*Option Package:*

; L List

; D Delete

; I Insert

; S Search

; = Number of Lines

; N Number and List

; R Replace

; A Append

; Q Clear Buffer

**Forms (Option)** This option allows the operator to enter and store forms which accommodate entry of variable information called variable fields. All variable fields on a form comprise a file which is stored using a unique message name. The file is stored without the form to conserve disk space. The operator can retrieve the file in one of three formats: merged with the form, merged with a pre-printed form, or without the form. To minimize transmission costs, files may be sent to a remote computer or a Comm-Stor unit without the form.

An example of the forms feature is:

```
. FC 1075
. P JONES, A. J.
```

The first command line loads form 1075 into a forms buffer in Comm-Stor. Once the desired form is in the forms buffer, all subsequent operations which use this form, such as Print, Display and Copy, can be performed without re-entering the command. The second command instructs Comm-Stor to merge the file on A. J. JONES with form 1075 and print both on the local printer.

Another example is printing multiple forms.

```
. P A/*
```

This command will merge all files with the previously loaded form 1075 starting with the beginning of the alphabet (A) and continuing through the end of the Directory (\*), and print each file and the form on the printer.

**Baud Rates** A rear panel switch for each port provides nine selectable baud rates up to 9600. In addition, each switch has a KYBD position which allows the operator to select the baud rate for each port via a command from the local terminal.

An example of this is:

```
. BP 1200
```

The . BP signifies a new printer port baud rate follows. The 1200 is the new rate. The unit will continue at this rate until changed by the operator.

**Status** Status information can be requested by the operator and displayed on the local terminal or sent to a remote system.

**Comm-Stor Adjusts to Its Environment** Comm-Stor has been designed to respond to a factory selected set of commands and control parameters which allows the use of this equipment in most applications.

However, several applications may require different code configurations for the unit functions. To accommodate these users, the system has a built-in feature which allows the user to reconfigure it to match his requirements without changing his system. There are two levels of reconfigurable variables: those set at installation and those used on a frequent basis by the operator.

Some of the variables that may be reconfigured at installation are:

- Terminal Command Set
- Modem Command Set
- Command Separators
- RS-232 Signal Conditioning
- Output Delay
- Maximum Message Length
- Maximum Message Name Length
- Half/Full Duplex

Some of the operating modes that can be selected by the operator from the terminal are:

. AM	Alpha Mode	. IM	Include Message Name in Text
. SM	Sequential Mode	. IX	Exit Message Name in Text
. MM	Monitor Mode	. SB	Standby Disk Power
. MX	Exit Monitor Mode	. BT	Terminal Baud Rate
. EM	Terminal Echo Mode	. BM	Modem Baud Rate
. EX	Exit Echo Mode	. BP	Printer Baud Rate

**And Comm-Stor Has These Features Too . . .**

- Independent user-selectable Baud Rates for each port—50, 75, 110, 134.5, 150, 300, 600, 1200, 1800, 2000, 2400, 3600, 4800, 7200, 9600 Baud.
- High Capacity: Over 240,000 char./disk. Messages can be configured to any length. Ex: For messages of 128 characters, the capacity is over 1,700 messages.
- Unattended operation, including Auto Answer, Auto Disconnect and Standby.
- Retransmit message.
- Stop Send, Resume Transmission.
- End of Disk Warning.
- Automatic Parity Generation and Detection.
- Reconfigurable to use mnemonics for foreign language commands.
- Power, Disk Ready, Disk Busy, Carrier and Status Indicators.

**Comm-Stor's Vocabulary** Below is a list of terminal commands and the standard set of mnemonics. These mnemonics are reconfigurable.

. C	Copy	. BT	Baud Terminal
. CN	Cancel <sup>1</sup>	. BM	Baud Modem <sup>1</sup>
. D	Display <sup>1</sup>	. BP	Baud Printer
. DD	Display Directory <sup>1</sup>	. EM	Echo Mode
. DS	Display Status <sup>1</sup>	. EX	Echo Exit
. E	Enter	. FC	Forms Complete <sup>1</sup>
. EA	Enter Automatic	. FV	Forms Variable <sup>1</sup>
. LE	Load Extension <sup>1</sup>	. FX	Forms Exit <sup>1</sup>
. LI	Load Initial Value <sup>1</sup>	. MM	Monitor Mode <sup>1</sup>
. P	Print <sup>1</sup>	. MX	Monitor Exit <sup>1</sup>
. PD	Print Directory <sup>1</sup>	. IM	Included Message Name Mode
. R	Receive <sup>1</sup>	. IX	Included Message Name Exit
. RA	Receive Automatic <sup>1</sup>	. SB	Standby Mode <sup>1</sup>
. RK	Receive and Copy Disk <sup>1</sup>	. PO	Modem Parity Odd <sup>1</sup>
. S	Send <sup>1</sup>	. PE	Modem Parity Even <sup>1</sup>
. SD	Send Directory <sup>1</sup>	. PX	Modem Parity Off <sup>1</sup>
. SK	Send Disk and Copy <sup>1</sup>	DC3	Stop Send <sup>1</sup>
. SS	Send Status <sup>1</sup>	DC1	Resume <sup>1</sup>
. MV	Move File to Edit Buffer	DC4	Reset <sup>1</sup>
. SV	Save File in Edit Buffer	NAK	Retransmit <sup>1</sup>
. AM	Alphabetical Mode <sup>1</sup>	ETX	End of Message <sup>1</sup>
. SM	Sequential Mode <sup>1</sup>		

<sup>1</sup>These commands may also be received from the modem port. A second set of control codes also exists for most of these commands.

## Applications

A few of the applications for Comm-Stor are:

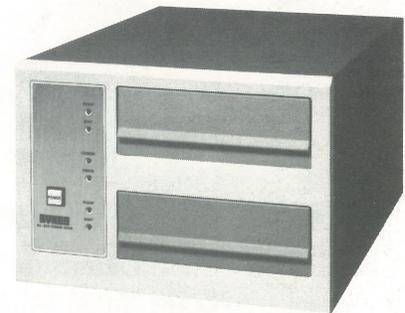
- Reservations Entry and Retrieval (Hotel, Airline, Car Rental, etc.)
- Batch Operations
- Inventory Control
- Time Share Services
- Text Editing
- Mailing List Preparations
- Form Letter Printing
- Order Entry
- Customer Files
- Point-of-Sale Applications
- Purchase Order Entry

## Options

- 2 Drives
- Message editing
- Printer Port
- Forms operation
- Binary Data
- Standby Disk Power
- Current Loop Interface
- Rack Mount Cabinet
- 220 V/50 Hz Power

## Environmental, Physical and Power Specifications

	Single Drive	Dual Drive
Dimensions:	13.75w x 5.25h x 20d in. 34.93w x 13.34h x 50.80d cm	13.75w x 9.6h x 20d in. 34.93w x 24.38h x 50.80d cm
Weight:	35 lbs 16 kg	52 lbs 23 kg
Power:		
Running	120W	170W @ 117/220V, 50/60 Hz
Starting	140W	200W @ 117/220V, 50/60 Hz
Operating Temperature Range:	40°-95° F 4°-35° C	
Operating Humidity Range:	20%-80% RH without condensation	



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