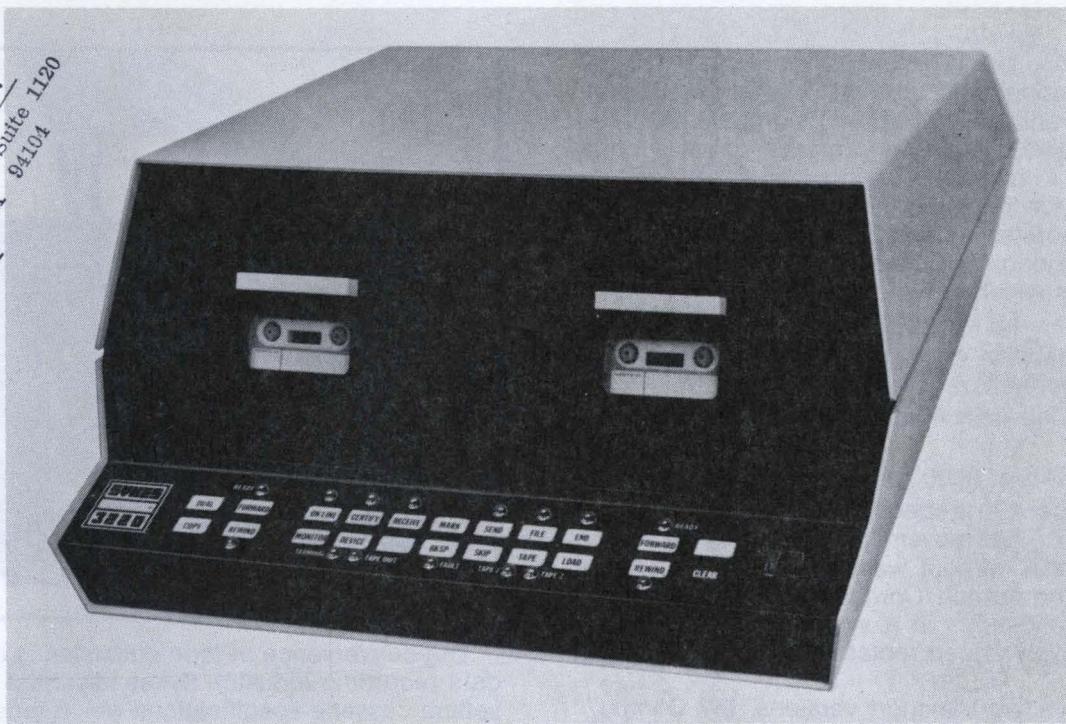


# CASSETTE SYSTEM FOR CRT TERMINALS

Represented By  
Wm. C. BENISON CO.  
315 Montgomery St., Suite 1120  
San Francisco, CA 94104  
(415) 363-2211



**SYKES SERIES 3000**

DEC 5 1974

The Sykes Series 3000 EIA Tape Cassette System has a combination of standard and optional features that can provide configurations for practically any application.

- One or two transports.
- Two RS232C Specified Inputs.
- Selectable input and output baud rates.
- Unattended remote operation for offhours transmission of data.
- Keyboard control for local operation.
- Automatic blocking.
- Large data capacity — up to 325,000 characters.
- Broad decoding capability (16 rows x 16 col.).
- Selectable escape mode of operation.
- Slow and fast search capability.
- Backspace record.
- Backspace file.
- Skip record.
- Skip file.
- Skip to end of data.
- High speed forward and rewind.
- Go to load point.
- Selectable character length — 5, 6, 7 or 8 bits.

• Remote Operations

- Tape 1 select
- Tape 2 select
- Start receive
- Exit receive
- Start send
- Stop send
- Load point
- File mark
- End mark
- Retransmit
- Load point, send to end.
- Reset
- Terminal select
- Tape unit select
- Send record
- Line cancel
- Character delete
- Store record
- Transparent receive
- Page
- Enquiry
- Search and respond
- Search and send
- Paper tape replacement.
- Simultaneous operation of transports.
- Full editing capability for non-buffered terminals.

**HIGH SPEED SEARCH** Allows the user to access any file directly by file address at an average speed of 120 ips.

**COPY OPTION** Provides the capability in systems with two transports to record simultaneously in both transports to copy data from one transport to the other. The user may copy records, files or the entire cassette.

**OUTPUT DELAY** Provides selection of one of seven automatic time delays from 165 msec to 1 sec. for three programmable delay operations such as carriage return, tab, and page.

**AUTO DISCONNECT** Upon completion of data transfer, this option allows an unattended remote system to disconnect the telephone after a preselected delay.

**CURRENT LOOP** Provides a 20 MA current loop interface for terminal devices such as teletypewriters.

**SELECTABLE BAUD RATE** Allows for one additional operating rate in the range from 50-4000 baud.

**TRANSPARENT MODE** Allows the tape unit to operate in a code transparent mode. Also provides a page feature which automatically records a file mark after each page of data.

**CARRYING CASE** Allows units in table-top configuration to be easily transported.



SYKES DATATRONICS INC.  
375 ORCHARD STREET  
ROCHESTER, NEW YORK 14606

The

# COMPU/CORDER® MINICOMPUTER CASSETTE SYSTEM

The Sykes Compu/Corder 120 magnetic tape cassette system is the newest addition to our time-proven line of systems currently operating in over 800 minicomputer installations. It is an advanced, high-performance direct access system developed in response to your needs. With interface and software for the listed models, the new Compu/Corder 120 incorporates all the time-proven design features offered in the original Compu/Corder 100 and adds to it those elements which provide:

- Fast data transfer—up to 12000 bits per second.
- Incremental capability—up to 15 characters per second with no additional buffering.
- High data reliability—less than one error in up to  $10^8$  bits read.
- Extended MTBF—over 3000 hours.

The Compu/Corder 120 is specifically designed for those applications requiring fast movement of data and the ability to write short records without wasting tape in start/stop operations. Thus, the Compu/Corder 120 is well suited to small business applications in a system environment as well as a competitively priced replacement for paper tape devices.

Available in up to two transport versions, the Compu/Corder 120 fulfills the common need in business applications for updating, sorting and merging data files. Its proven high reliability assures the user that neither he nor his customers will suffer from costly and time consuming failures.

## Specifications

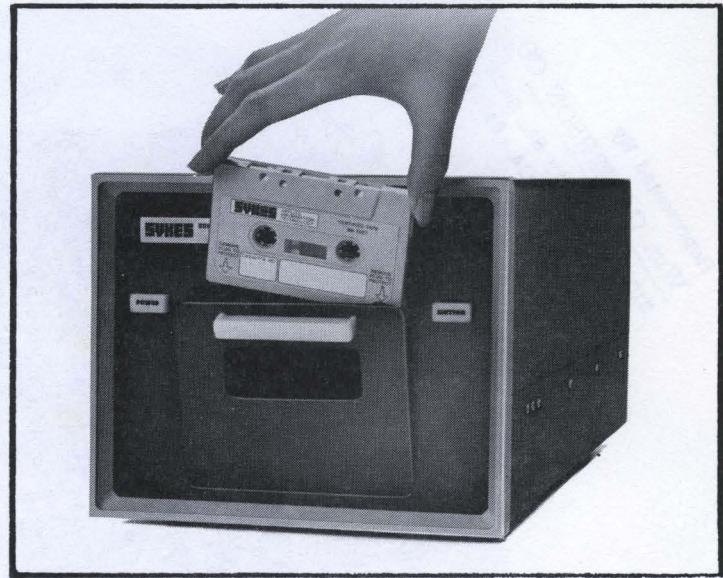
The Sykes Compu/Corder 120 magnetic tape cassette system is an advanced, high-performance direct access storage system with interfaces and software support for the following minicomputer systems: PDP 8, PDP 8/L, PDP 8I, PDP 8e, PDP 11, NOVA, SUPER NOVA, 800, 1200, 810, 1210, Varian 620i, 620L, 620f, Micro 810, CIP 2100, HP2114, 2115, 2116, 2100.

Available also is a Universal Interface Kit for use on those computers for which a standard interface does not exist.

- Recording Density  
1000 bits per inch  
2000 flux reversals per inch
- Read/Write Speed  
(Head engaged)  
5 or 12 inches per second
- Transfer Rate  
Up to 12,000 bits per second  
Up to 1200 characters per second
- Search/Rewind Speed  
(Head disengaged)  
120 inches per second
- Search Time  
(300' cassette)  
Maximum: 30 seconds  
Average: 12 seconds
- Start Time (5 ips) 20 milliseconds  
(12 ips) 30 milliseconds
- Stop Time (5 ips) 30 milliseconds  
(12 ips) 45 milliseconds
- IRG (5 ips) .10"  
(12 ips) .45"
- High Speed Stop Time  
.26 seconds maximum

- Recording Technique  
Wide field recording, bit serial,  
bi-phase recording
- No. of Recording Tracks / Transport  
Two
- Motor Drive/Transport  
Three motors—one synchronous  
capstan motor  
Two DC reel motors
- Circuitry  
All solid state
- Error checking  
Hardware generation and detection  
of double width parity and  
character sync.
- Character Framing  
Double width parity
- Clocking technique  
Derived from data
- Error Rate  
Less than 1 in  $10^8$  bits read, typical
- MTBF  
3000 hours @ 99% confidence level  
based on user experience

- Block Length  
Dynamically variable, limited by  
tape length only
- Simultaneous Operation  
Fully simultaneous processing of  
separate tasks is possible if multiple  
systems, such as two Compu/Corder  
120 systems, are interfaced to a  
single computer
- Character Length  
8 data bits plus double width parity bit
- Character Transfer  
8-bit parallel
- Logic Levels  
+5 volts DTL or TTL compatible
- Multiple Transports (up to 2) to permit  
data manipulation such as merging,  
sorting, etc. without changing cassettes.



The convenience of tape cassettes is unequalled in the data recording industry. Sykes assumed a leading role in setting cassette specifications which meet the demanding requirements of the computer marketplace. The growing acceptance of cassettes is directly attributable to the faith our customers have placed in Sykes' sound design, rigid quality control and keen awareness of market trends and needs.

**SYKES**<sup>®</sup>  
SYKES DATATRONICS INC.  
375 ORCHARD STREET  
ROCHESTER, NEW YORK 14606

Effective Date: August 1, 1973



APPLIED  
INFORMATION  
TECHNOLOGY

### SERIES 3000 EIA SYSTEM DESCRIPTION

Represented By  
Wm. C. BENISON CO.  
315 Montgomery St., Suite 1120  
San Francisco, CA 94104  
(415) 393-2211

3120 or 3220

#### I. Basic System:

##### Operational Features include:

- Off line operation
- 110, 150 and 300 baud selection
- Seven switch functions: Rewind, Clear, Send, Load, Mark, File and End.
- Eight remote commands: Start Send, Stop Send, Start Receive, Exit Receive, Reset, Line Cancel, Character Delete and Store Record.

#### II. Options:

On Line/Device Select - provides two separate switches used for placing either the terminal or tape unit on line.

Monitor Mode - allows tape unit to record monitor copy when terminal is on line, terminal may monitor when tape unit is on line.

Expanded Remote Control - gives 15 additional remote functions, plus Escape Sequence operation.

Certify - reads a record, file, or complete tape and checks for character errors. When a parity error or a character framing error is found the fault indicator will blink and the unit will stop.

Manual Search - provides Forward, Backspace and Skip commands.

High Speed Interface - provides switch selectable data rates of 600, 1200, 1800, 2400 and 3600 baud.

Vacuum Tape Cleaner - is an integral vacuum unit used to extend usable tape life by keeping the tape surface free of contamination.

Peripheral Keyboard - provides operation up to 10 feet away from the 3000 unit and duplicates switches on the integral keyboard. No integral keyboard is provided when the Peripheral Keyboard option is selected.

Rack Mount Chassis - 19" w x 8.75" h x 21.5" d

### 50 Hz Operation

Output Delay - provides a choice of seven automatic time delays (from 165 msec. to 1 sec.) for up to three operations (e.g. carriage return, page and tab). The specific characters which cause the delay in your system are programmed by a 40 pin connector.

Custom Baud Rate - provides a variable data rate from 25 to 1200 baud by means of potentiometer settings.

Auto Disconnect/Remote Interrupt - causes the modem to disconnect from the remote station whenever a pre-set adjustable period of inactivity is detected. It will also interrupt during an off-line operation and place the 3000 EIA System on-line. At the time when the circuit would normally disconnect from the modem, the System will return to the off-line state.

Transparent Mode - is a local or remote receive mode in which all codes are recognized as data only and written on tape. This option includes a Page feature which automatically records file marks between pages of data.

20 MA Current Loop Interface - provides a 20 MA current loop interface for the terminal device. An echo feature is provided.

Copy/Dual Option - enables a dual transport system to copy a record, file or complete tape and to receive information on both tapes simultaneously.

High Speed Search\* - automatically stores address information within each file mark and provides a high speed bi-directional file search at an average search speed of 120 ips. This option offers three remote features which may be initiated either from the terminal or from the on-line device. These functions are: Address Inquiry, which initiates a response consisting of the current file address; Search and Respond, which initiates a high speed search directly to the requested file and responds with the file address after completion of the search; and Search and Send, which initiates a high speed search directly to the desired file and sends the contents of the file.

Chassis Slides - provides easy handling of rack mounted units.

Custom Code Programming Kit - offers the flexibility of selecting any code of up to eight bits in length to perform any of the remote operations. The kit includes connectors and wire jumpers.

Molded Plastic Carrying Case - offers a convenient carrying case for table top units with integral keyboard.

EIA Cables - are available in 5, 10, 20, 35 and 50 ft. lengths with male or female connectors at either end.



SYKES DATATRONICS INC.  
375 ORCHARD STREET  
ROCHESTER, NEW YORK 14606

Effective Date: February 1, 1974

PRICE SCHEDULE  
SERIES 3000 EIA SYSTEM

I. Unit Price of Basic Systems

	3120 EIA	3220 EIA
	\$2190.	\$3180.

Represented By  
Wm. C. BENISON CO.  
315 Montgomery St., Suite 1120  
San Francisco, CA 94104  
(415) 398-2211

Note: The Basic System configuration is a Table Top Chassis with integral control keyboard and 60 Hz. operation. Operational features include:

- Off-Line operation
- 110, 150 and 300 baud selection
- Basic remote commands: Start Send, Stop Send, Start Receive, Exit Receive, Reset and Edit Codes.

II. Unit Price of Options

A. Factory Installed Options

<u>Option</u>	<u>Unit Price</u>	<u>Prerequisite Options</u>
1. On Line/Device Select	\$193.	None
2. Monitor Mode	83.	On Line/Device Select
3. Expanded Remote Control	182.	None
4. Certify	28.	None
5. Manual Search (FWD, BKSP & SKIP)	66.	None
6. High Speed Interface (600, 1200, 1800, 2400 & 3600 Baud)	215.	None
7. Tape Cleaner (2 required w/3220)	132.	None
8. Peripheral Keyboard	413.	None
9. Rack Mount Chassis (19")	138.	None
10. 50 Hz. Operation	83.	None

B. Factory or Field Installable Options\*

1. Output Delay	154.	None
2. Custom Baud Rate	198.	High Speed Interface
3. Auto Answer/Remote Interrupt	165.	On Line/Device Select
4. Transparent Mode	132.	Expanded Remote Operation
5. Current Loop Interface (20 MA)	193.	None
6. Copy/Dual	182.	Dual Transport System
7. High Speed Search	435.	Expanded Remote Operation and Manual Search
8. Chassis Slides	55.	Rack Mount Chassis

\* Options 1 thru 6 are all contained on the same P. C. board. This board cannot be updated once ordered and shipped to a customer. A complete new board must be ordered with the required combination of options. Up to 50% credit will be granted upon return of old option board depending upon condition.

### III. Discount Schedule

To obtain the quantity discount, add the Basic System unit price to the unit price for all required options and come up with the Total System Unit Price. Use the schedule below to obtain the percentage discount for each system.

<u>Qty/Yr/Order</u>	<u>Total System Unit Price</u>				
	<u>0 to \$2199</u>	<u>\$2200 to \$2599</u>	<u>\$2600 to \$2999</u>	<u>\$3000 to \$3399</u>	<u>\$3400 &amp; up</u>
1 - 9	0	0	0	0	0
10 - 29	3%	4%	5%	6%	7%
30 & up			(Factory Quote)		

- Examples:
1. Customer specifies a basic 3120 unit (\$2190) with options of \$400, total system unit price \$2590. Quantity is 10 units. From Schedule, discount would be 4%, and price to customer \$2486. (.96 x \$2590).
  2. Customer specifies a basic 3220 unit (\$3180) with options of \$720, total system unit price \$3900. Quantity is 20 units. Discount would be 7% and customer price \$3627. (.93 x \$3900).

### IV. Accessories -- No discounts allowed

- Custom Code Programming Kit - \$50.00
- Molded Plastic Carrying Case (for table top chassis only) - \$198.00
- EIA I/O Cables

Cable lengths are available in lengths of 5, 10, 35 and 50 feet. All cables have EIA-RS232 fully compatible connectors on each end.

Specify: either both male connectors, both female connectors or one female and one male connector.

Unit Price: \$39.00 + \$0.30 per foot

- Cassettes for use in 3000 Systems: 

	<u>Qty.</u>	<u>Price</u>
5 - 9		\$9.50 ea.
10 - 99		9.00 ea.
- Technical Operation Manual - \$20.00
- Service Manual - \$45.00

All prices are:

1. Subject to change without prior notice
2. Exclusive of all taxes
3. F.O.B. Rochester, New York, U.S.A.

# HIGH SPEED SEARCH

## option now offered with the

# SYKES

# SERIES 3000



The High Speed Search Option available with Sykes' Series 3000 Tape Cassette System offers you the ability to locate any data file at an average search speed of 120 inches per second. This yields an average search time on a 300 foot cassette of only a few seconds. This high speed bi-directional search feature is accomplished without the need for special preformatted cassettes or address tracks.

This option provides more than 3700 discrete file addresses, where the address of a particular file is automatically stored as a two character record within the file mark. This provides a means of positive file identification.

A typical application for the Series 3000 Tape Cassette System with the High Speed Search Option might be with a CRT terminal and a communications link to a computer. With this configuration, it is possible to read the current file address, search out any other file address, or search out a file by address and send the file. Any of these operations can be done by the operator at the local terminal, or by the remote computer without the assistance of the local operator.

In summary, Sykes gives you the only direct access, high speed search option in the cassette industry.

Represented By  
Wm. C. BENISON CO.  
315 Montgomery St., Suite 1120  
San Francisco, CA 94104  
(415) 393-2211

### WHAT HIGH SPEED SEARCH DOES FOR YOU

First, it greatly enhances the operation of your terminal by reducing search time to a minimum.

Second, it provides the kind of flexibility which permits you to update files frequently rather than waiting until the number of updates warrants the slow, sequential, file-by-file update process associated with other tape systems.

Third, it allows you to use your equipment in real-time

applications requiring rapid access to files for credit authorization, account information, address verification, etc.—areas where other systems are impractical.

Fourth, when utilized in a hard wired computer application the Sykes model 3120 or 3220 EIA System with High Speed Search can be used as a tape peripheral with minimum software required.

Importantly, with any application, you save time.

# SYKES

# SERIES 3000

## HOW DOES HIGH SPEED SEARCH WORK

All Series 3000 Systems employ signals which correspond to literal tape addresses. These signals are generated by a chopper wheel and photosensor associated with the take up spindle on the tape transport. As tape is advanced, pulses from the photosensor cause a counter in the High Speed Search Option to increment or decrement, depending upon direction of tape movement. Thus, the current tape address is always held in the counter.

### Writing a File

Prior to writing a file, the operator can request the present file address from his terminal, or similar input device, or the address may be requested via a communications link by a remote device. The system will then print out or display this address on the local I/O device, or transmit it to the remote location. The operator then logs this address with the file name (or it can be stored in a computer as a directory). The file is then prepared and written on tape at this address. This series of steps continues until the task is complete.

At the end of each file, the operator records a file mark. This mark is used to separate files

and contains the address of the next file. As the file mark is written, the appropriate address is automatically inserted in the file mark. The operator needn't be concerned with writing the correct address on tape.

### Searching for a File

When seeking a specific file, the operator, or the remote computer, simply consults the directory for the appropriate file address. The desired search command is followed by the four-digit file address. The High Speed Search Logic determines the speed and direction of tape in order to access the file in the least amount of time. If the requested address is close by, the unit will backspace or skip forward accordingly. If high speed is called for, the head is raised to save both tape and head wear, and the tape moves at an average speed of 120 ips (12000 chars./sec.). When the tape approaches the requested address, (determined by counting Tape Address signals) high speed motion is stopped, the head lowers and the tape is searched forward. The system will automatically continue searching regardless of undershoot or overshoot until the proper address is found.

## HIGH SPEED SEARCH AND SYKES' EIA CASSETTE SYSTEM

When used with a Model 3120 or 3220 EIA compatible cassette system and a terminal, High Speed Search offers benefits not otherwise available. Included in the 24 remote commands available for operating the EIA System are three commands which are used with High Speed Search.

**ADDRESS ENQUIRY**—This command causes the unit to respond with its present tape address. This is the command which provides the operator with the address of the file which is about to be entered.

**SEARCH AND RESPOND**—This command directs the Sykes system to go at High Speed to the address requested and to respond when it gets there by printing or displaying the address. If desired, the response can be suppressed. This command is useful if the user

wishes to change or delete the file at a given address.

**SEARCH AND SEND FILE**—In a typical retrieval application, the user may wish to call out a specific file (such as for credit authorization). This command will cause the unit to locate the file, and transmit the information in the file requested to the appropriate device.

The applications for this type of high speed search are endless. Sykes has successfully bridged the gap between slow, sequential magnetic tape systems and fast, but costly, disc systems. Thus, you can have a reliable, low cost cassette system which also provides fast access to specific files.

Call your Sykes representative for a demonstration of this unique system or write to the head office at the address below.

# SYKES

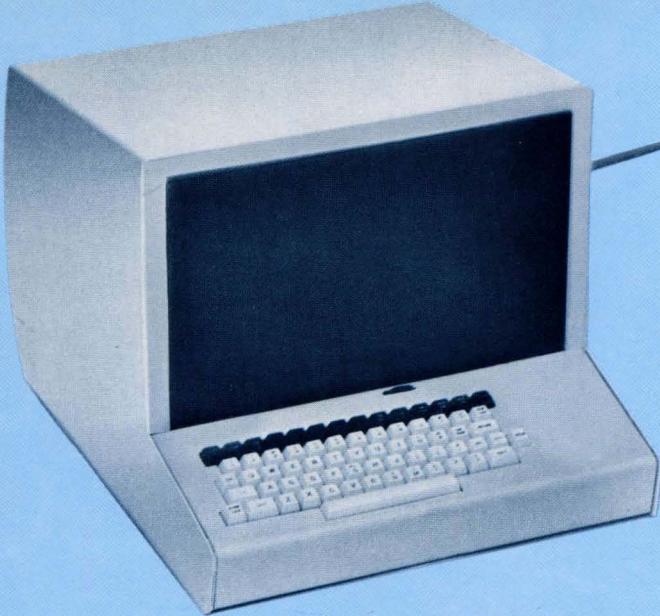
SYKES DATATRONICS INC. ®  
375 ORCHARD STREET  
ROCHESTER, NEW YORK 14606  
(716) 458-8000 TELEX 97-8326

# SYKES SERIES 3000/EIA

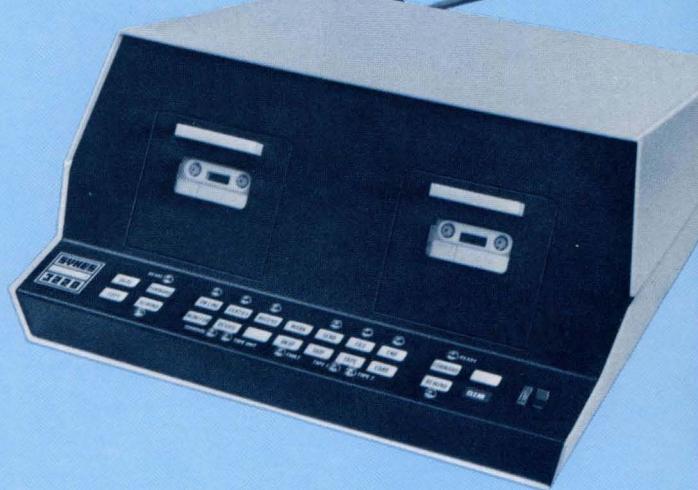


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(415) 393-2211

DEC 5 1974



TERMINAL



TAPE UNIT

## GENERAL DESCRIPTION

The new Sykes Series 3000 EIA Tape Cassette System features high speed search—a direct access capability which allows any desired location on tape to be accessed bi-directionally at 120 ips with the tape head disengaged. Searching with the tape head disengaged is a patented feature of Sykes equipment that saves both head and tape wear.

The Sykes Series 3000 EIA Tape Cassette System is a one or two-transport cassette system which is plug-to-plug compatible to all equipment interfaced in accordance with EIA Standard RS-232-C and CCITT (European). This system includes two interfaces, each with a selectable baud rate. The first interface is for direct connection to operator oriented I/O devices such as teleprinters, CRT display terminals and high speed tape devices; the second is for connection to a remote device via a communications link. A 20 ma current loop interface is also provided as an option.

The Sykes Series 3000 EIA Tape Cassette System is capable of functioning as a stand-alone communications terminal in either manual or unattended mode. It can be operated remotely by means of user-selected codes sent from the keyboard of an attached I/O device or directly from the communications line. An auxiliary keyboard gives the local operator additional flexibility by offering added control features and status indicators.

## APPLICATION AREAS

Series 3000 takes the cost and complexities out of data communications by providing an easy, fast system for handling, storing, retrieving, transferring or transmitting data. Several areas of application are:

- Software preparation.
- Minicomputer peripheral.
- Teletype; key-to-tape batch processing.
- Video terminals; batch processing, off line directory files of forms, inventory, etc.
- Single ended message preparation.
- Central, stand-alone communications terminals, transmit and receive.
- Speed change unit for linking high speed and low speed devices.
- Data collection, then on line and converted to IBM compatible input.
- Stand-alone bulk terminal store.
- Direct replacement for paper tape systems.

Time share terminals.

## AVAILABLE IN 4 VERSIONS

Desktop with integral keyboard.

Desktop with peripheral keyboard.

Rack mounted with integral keyboard.

Rack mounted with peripheral keyboard.

## FEATURES

The Sykes Series 3000 EIA Tape Cassette System has a combination of standard and optional features that can provide configurations for practically any application.

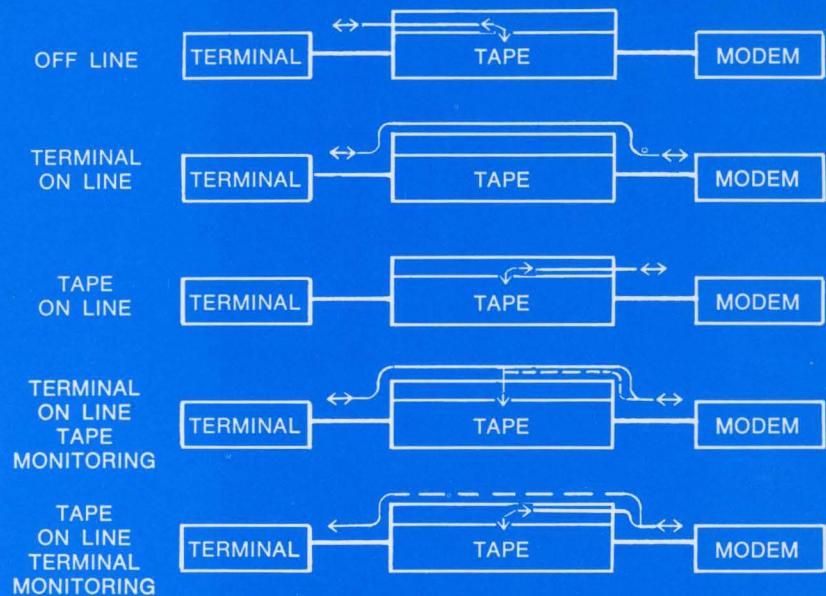
- One or two transports.
- Two RS232C Specified Inputs.
- Selectable input and output baud rates.
- Unattended remote operation for off-hours transmission of data.
- Keyboard control for local operation.
- Automatic blocking.
- Large data capacity—up to 325,000 characters per cassette.
- Broad decoding capability (16 rows x 16 col).
- Selectable escape mode of operation.
- Simultaneous operation of transports.
- Full editing capability for non-buffered terminals.
- Slow and fast search capability.
  - Backspace record.
  - Backspace file.
  - Skip record.
  - Skip file.
  - Skip to end of data.
  - High speed forward and rewind.
  - Go to load point.
- Selectable character length—5, 6, 7 or 8 bits.
- Parity generation and detection.

The unit comes equipped with two RS-232 compatible connectors which reduces installation to the simple operation of connecting two cables.



**ACOUSTIC COUPLER**

## MODES OF OPERATION



## MODES OF OPERATION

Series 3000 increases the efficiency of any system by providing you versatility through these modes of operation:

- Off line Mode (Terminal)—In this mode, the terminal device is connected to the tape unit. Information can be transferred in either direction between the selected tape and the terminal device. Transfer is in the half-duplex mode.
- On line to terminal—In this mode of operation, the terminal device is connected to the modem and the tape unit is by-passed. Communications may be either full or half-duplex.
- On Line to Tape Unit—In this mode, the tape unit is connected directly to the modem. Transfer of data occurs in the half-duplex mode.
- Monitor—With the terminal On Line, the tape unit may also receive data in the monitor mode; similarly, with the tape unit On Line, the terminal may also receive data in the monitor mode.

## SELECTABLE OPERATING RATES

Two switches are provided to allow independent selection of any of the eight baud rates listed below or the optional baud rate for the terminal and the data set.

- 110 BAUD
- 1200 BAUD
- 150 BAUD
- 1800 BAUD
- 300 BAUD
- 2400 BAUD
- 600 BAUD
- 3600 BAUD
- OPT-50 to 4000 BAUD

## REMOTE OPERATIONS

The following operations may be initiated from the terminal or via the communications input by receipt of user selected characters. These characters may be any bit configuration or may be an escape sequence, which is an escape code followed by any other code (255 possible codes), and are programmed by the user. Features with an asterisk cannot be coded as an escape sequence. Features that are not desired may be inhibited.

**TAPE 1 SELECT** Selects Tape Transport 1 in two Transport configurations.

**TAPE 2 SELECT** Selects Tape Transport 2 in two Transport configurations.

**START RECEIVE\*** Initiates a receive mode.

**EXIT RECEIVE\*** Terminates a receive mode.

**START SEND\*** Initiates or resumes a send mode.

**STOP SEND\*** Interrupts a send mode.

**LOAD POINT** Positions tape at load point.

**FILE MARK** Transcribes file mark on tape.

**END MARK** Transcribes end of data mark on tape.

**RETRANSMIT** Backspaces a record or file and sends data again.

**LOAD POINT, SEND TO END** Goes to load point and sends all data.

**RESET\*** Resets all logic.

**TERMINAL SELECT** Places terminal On Line.

**TAPE UNIT SELECT** Transfers tape unit from monitor mode to On Line mode and places terminal in monitor mode.

**SEND RECORD** Sends a single record.

**LINE CANCEL\*** In the edit mode, this resets the memory so that the line may be re-entered.

**CHARACTER DELETE\*** In the edit mode, this backspaces the memory so that a character may be re-entered.

**STORE RECORD\*** In the edit mode, data from the terminal is stored in an internal buffer until this character (usually line feed) is encountered, at which time the data is placed on tape as one record; this assures ample storage for an entire line of characters (up to 128) for editing purposes.

**TRANSPARENT RECEIVE** Option which allows the tape unit to be code independent while receiving data.

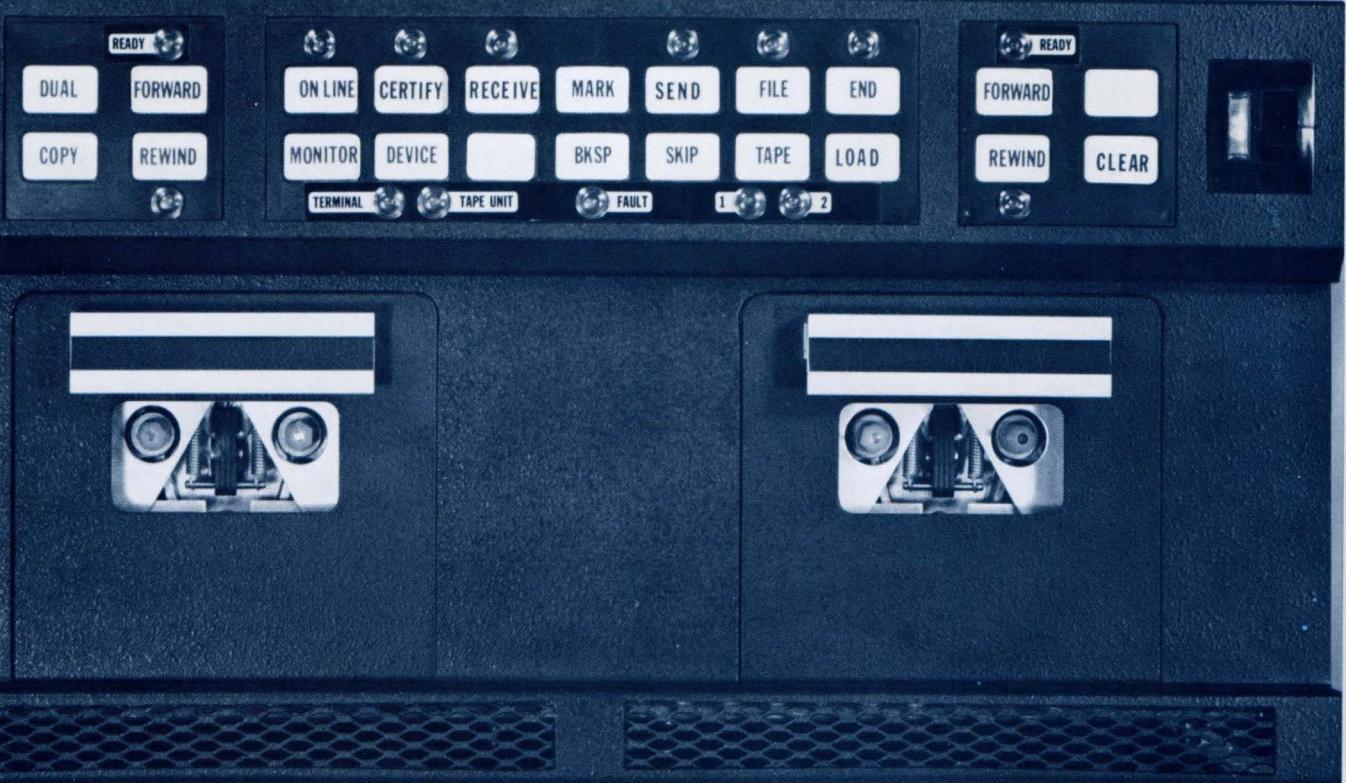
**PAGE\*** Option which automatically creates files by inserting file marks between pages of data.

**ENQUIRY** Causes units with High Speed Search Option to respond with current four digit file address.

**SEARCH AND RESPOND** Upon receipt of a four digit file address from a remote device, units with the High Speed Search Option will find the addressed file and stop, and if desired, respond with the address to signal completion of the search.

**SEARCH AND SEND** Upon receipt of a four digit file address from a remote device, units with the High Speed Search Option will find the addressed file and send the contents of that file to that device.

**SYKES**  
3220



RACK MOUNT CHASSIS

## CONTROLS

A wide range of functional flexibility was designed into the 3000 to give you high speed processing and complete control:

**CLEAR** Resets all circuitry.

**DEVICE** When On Line, selects either terminal or tape as the On Line device.

**ON LINE** Places the selected device On Line, or places equipment off line, connecting tape unit to terminal.

**MONITOR** When On Line, allows the non-selected device to accept data while normal operations are performed with the selected device.

**FILE** Places the unit into a file oriented mode for all subsequent operations.

**END** Places the unit into an end of data oriented mode for the next operation.

**MARK** Used in conjunction with file, end of data or load to respectively generate a file mark, end mark or load point.

**SEND** Places the tape unit into the send mode which transmits a record, file or all remaining files to the selected unit.

**RECEIVE** Places the tape unit into the transparent receive mode and enables the automatic insertion of the file mark character at the end of each page if Page Mode is selected.

**LOAD** Employs high Speed rewind if not on clear leader, then initiates a search for load point.

**SKIP** Directs the tape unit to skip a record, file or skip to end of data.

**BKSP** Directs the tape unit to backspace a record or a file.

## INDICATORS

Explicit indicators provide instant operation information:

**READY** Indicates that transport is ready for operation.

**REWIND** Indicates that transport is rewinding.

**ON LINE** Indicates that either the tape unit or terminal are On Line to the data set.

**TERMINAL** Indicates that the terminal is one of the selected devices; will flash when terminal is selected to monitor.

**TAPE UNIT** Indicates that the tape unit is one of the selected devices; will flash when tape unit is selected to monitor.

**SEND** Indicates tape unit is in the send mode.

**RECEIVE** Indicates tape unit is in the receive mode.

**FILE** Indicates unit is in file oriented mode.

**END** Indicates unit is in end of data oriented mode.

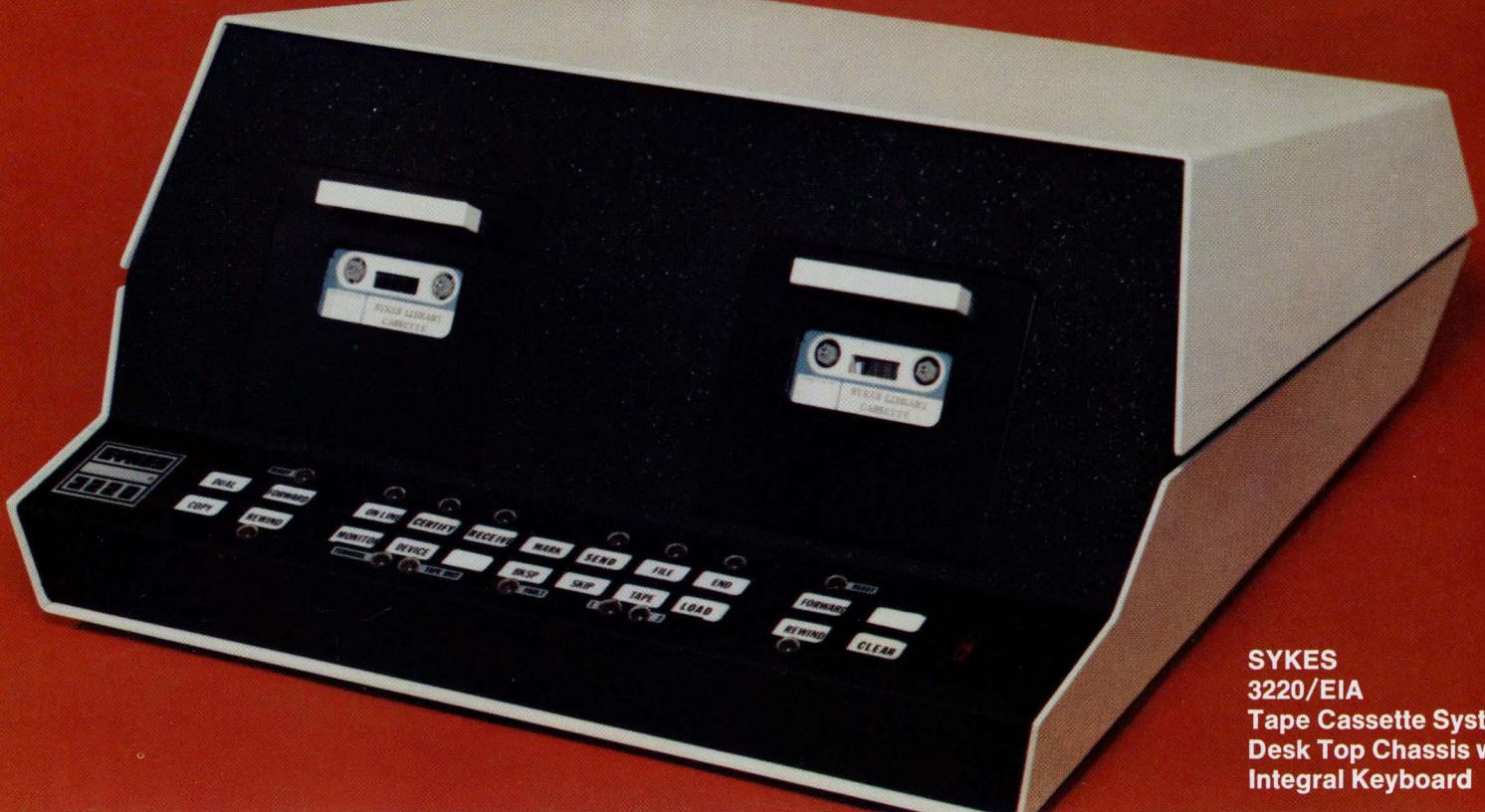
**SEARCH** Indicates that a backspace, skip, load point or high speed search is being performed. (Peripheral Keyboard only.)

**FAULT** Indicates improper operation or will flash to indicate a data error.

**TAPE 1** Indicates that tape transport number 1 has been selected in a dual transport system.

**TAPE 2** Indicates that tape transport number 2 has been selected in a dual transport system.

**CERTIFY** Indicates selected transport is checking character parity for errors.



**SYKES**  
**3220/EIA**  
**Tape Cassette System**  
**Desk Top Chassis with**  
**Integral Keyboard**

### SERIES 3000 EIA SYSTEM CONFIGURATION

#### BASIC SYSTEM:

##### TRANSPORTS

- 3120 single.
- 3220 dual.

##### OPERATIONAL FEATURES INCLUDE:

- Off line operation.
- 110, 150, and 300 baud selection.
- Eight switch functions: Rewind, Clear, Receive, Send, Load, Mark, File and End.
- Eight remote commands: Start Send, Stop Send, Start Receive, Exit Receive, Reset, Backspace Character, Line Cancel and Store Record.
- Standard set of Sykes codes for Remote Functions.

#### OPTIONS:

**ON LINE/DEVICE SELECT** Two separate switches used for placing either the terminal or tape unit on line.

**MANUAL SEARCH** Provides "forward", "backspace", and "skip" commands.

**EXPANDED REMOTE OPERATION** Gives 15 additional remote functions.

**HIGH SPEED INTERFACE** Switch selectable 600 to 3600 baud.

**MONITOR** Allows tape to record monitor copy when terminal is on line, terminal may monitor when tape unit is on line.

**CERTIFY** A record, file, or complete tape can be certified. When a parity error is found the fault indicator will blink and the unit will stop.

**OUTPUT DELAY** Provides a choice of seven automatic time delays (from 165 msec. to 1 sec.) for up to three operations (carriage return, page, and tab). The specific characters which cause the delay in your system are programmed by a 40 pin connector.

**COPY/DUAL OPTION** Enables two transport system to copy a record, file, or complete tape from tape 1 to tape 2 and to receive information on two tapes simultaneously.

**AUTO DISCONNECT/REMOTE INTERRUPT** Causes the modem to disconnect from the remote station whenever a pre-set adjustable period of inactivity is detected. It will also interrupt an off-line mode and place the 3000 EIA System on-line. At the time when the circuit would normally disconnect from the modem, the System will return to the off-line state.

**TRANSPARENT MODE PAGE** Is a receive mode in which all codes are recognized as data only and written on tape. Includes a page feature which records file marks automatically.

**CURRENT LOOP** Provides a 20 ma current loop interface for the terminal device. The echo feature of this option is strappable.

**CUSTOM BAUD RATE** Provides a variable rate in the 50-4000 range and is set by two potentiometers on the option board.

**HIGH SPEED SEARCH** Locates previously written files bidirectionally at 120 ips. Capacity of 300' cassette is approximately 3600 addresses, 2600 128-character records, 300 1000-character files. The address is written at the beginning of each file.

**PERIPHERAL KEYBOARD** Provides operation up to 50 feet away from the 3000 unit and duplicates switches on integral keyboard. No integral keyboard is provided when this option is selected.

**TAPE CLEANER** An integral vacuum unit used to extend usable tape life by keeping the tape surface free of contamination.

**RACK MOUNT CHASSIS** 19" w x 8.75" h x 21.5" d.

**CHASSIS SLIDES** For Rack Mount Chassis.

**CUSTOM CODE PROGRAMMING KIT** Provides capability for programming Remote Functions with user selected codes.

**MOLDED PLASTIC CARRYING CASE** For Table Top Unit only.

**EIA/IO CABLES** Available in 5, 10, 20, 35 and 50 ft. with male or female connectors on either end.

## **SPECIFICATIONS**

### **ENVIRONMENTAL AND PHYSICAL SPECIFICATIONS**

- Logic Circuitry: SILICON SOLID STATE.
- Cabinet Dimensions: Table-top 18.6" w x 8.81" h x 21.75" d.  
Rack mount 19" w x 8.745" h max. x 21.5" d behind panel.
- Weight: 55 pounds.
- Operating Temperature Range: 4° to 40°C.
- Operating Humidity Range: 20% to 90% RH without condensation.

### **POWER REQUIREMENTS**

- 115/230 VAC ± 15%, 60 HZ, 200 watts (Two Transports).  
(50 HZ optional)

### **FOR ADDITIONAL INFORMATION**

**SYKES**

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SYKES 15B