TECHTRAN INDUSTRIES

TECHTRAN
INDUSTRIES

Now you get the capability to feature BOTH low speed operator-oriented and high speed systems-oriented I/O in a single magnetic tape terminal. Capable of functioning as a plug-compatible storage unit in conjunction with operator-oriented data devices, the TECHTRAN 4100 Communications Terminal includes two variable-speed interfaces. The first is for connection to operator-oriented I/O devices such as teleprinters, CRT display terminals and high speed tape devices; the second is for connection to the communications line through a data modem.

The TECHTRAN 4100 Communications Terminal is also capable of functioning as a stand-alone data collection/communications terminal, operating in either a manual or an unattended mode. Complete operations of the 4100 can be performed remotely under control of user-selected codes, either from the keyboard of an attached I/O device or directly from the computer. The 4100 Terminal can also be operated under user-program-control from commercial time-sharing services. The self-contained, portable unit includes outstanding features like Dual Speed Versatility, Data Edit allowing changing of previously recorded data, and High Speed Search allowing selective retrieval of stored data. Speeds are incremental from 110 to 2400 baud with independent read/write speed capability, so that recording can be performed at one speed and playback at any other.

As you will note, the 4100 Communications Terminal is not just another cartridge or tape accessory unit. It is far more sophisticated, more advanced, more applications-oriented; and will give you a far greater range of performance than any other cassette terminal on the market today.

When you, as an interested buyer, couple all of the features of the TECHTRAN 4100 Communications Terminal with the single fact that it is priced far below the larger, more expensive units that it actually outperforms, then you'll certainly conclude that here's one Communications Terminal that *really* can meet all of your present and future data needs.

at last!

A DATA TERMINAL THAT IS BOTH OPERATOR AND SYSTEMS ORIENTED

unlimited!

Introducing the little data terminal that ☐ outperforms the bigger, more expensive computer peripherals ☐ is designed for present and future applications ☐ is virtually unlimited in its scope of operation and application…

…and, what will amaze you most, is its little price!
THE 4100 COMMUNICATIONS DATA TERMINAL.

STANDARD

features:

- Compatible with most operator terminals and mini-computer interfaces
- Off-line/On-line operation, switch selectable—stand alone, or use with other data processing/communications equipment
- High speed transmission, switch selectable—110 to 300 baud (600 to 2400 optional)
- Speed independent—record at one speed, playback at any other
- Unlimited versatility—designed for both present and future applications
- High density storage (800 bpi) using standard Philips type cassettes—70,000 character tape capacity
- Direct replacement for paper tape—identical operations
- No hardware or software modification to update existing systems
- High reliability—error rate less than 1 in 10^7
- Non-print capability, switch selectable
- Automatic BOT/EOT operations and no tape threading
- Dual interfaces—RS-232B (TTY current interface optional)
- Self-contained—portable, compact
- LOW COST

OPTIONS:

FULL REMOTE CONTROL/ UNATTENDED OPERATION

The Remote Control feature provides the capability to fully operate the 4100 Terminal under control of user-selected codes, sent either from the keyboard of the attached operator-oriented I/O device or directly from the computer. When used with an Auto-Answer modem (or directly on line) the 4100 will automatically answer incoming calls to provide unattended data station operations.

HIGH SPEED SEARCH

The High Speed Search feature provides the capability to selectively retrieve data stored on a cassette. Search rate is 1000 cps and is simply controlled from the keyboard of the attached operator-oriented I/O device or directly from the computer. Upon command, the tape automatically moves into high speed, locates the desired data and outputs that record.

DATA EDIT

The Data Edit feature provides the capability to correct or change data previously recorded, a feature usually found only on large and expensive processing systems. The feature not only provides the capability to correct data, character-for-character, but also includes the capability to expand or contract line and record lengths easily, and remotely.

HIGH SPEED

The High Speed feature provides the capability to incrementally operate the 4100 Terminal at speeds up to 2400 baud (240 characters per second). A 202 Modem Reverse Channel Controller is also available to provide complete on-line high speed operations.

MODELS:

MODEL 4100—is plug compatible with most serial data equipment operating in the USASC11 Code. Includes RS-232B interfaces for both the operator-oriented I/O and the communications line interfaces. The TECHTRAN 4100 can be fitted with all available optional features.

MODEL 4120—is plug compatible with IBM 2741 and other similar terminals operating in the IBM or EBCDIC Codes, such as: Datel 30, ITEL (Dura) 1021 and 1051, Anderson-Jacobson 841 and Trendata 1000. The TECHTRAN 4120 provides for off-line data preparation, remote text editing, repetitive typing, remote job entry, on-line print or non-print capability.

MODEL 4130—is a processor-oriented cassette terminal for use as both a parallel interfaced computer peripheral and as an off-line operator-oriented storage unit. It provides a mini-computer with an RS-232 interface, buffered telecommunication peripheral operations and cassette file storage, replacing the capabilities of present paper tape I/O systems. The TECHTRAN 4130 can also be used for off-line data preparation and storage. It includes an RS-232B interface for the operator-oriented I/O and a DTL/TTL parallel interface for the processor. The 4130 can be fitted with all available optional features.

designed for clarity!

FRONT PANEL CONTROLS AND INDICATORS

The indicator lights and operator controls of the 4100 Communications Terminal have been designed for simplicity and clarity. The indicators include dual-function indications performed by having both a BLINKING and a STEADY ON condition, to provide the ultimate in operator signalling. Generally, the front panel controls are those that will be used during day-to-day operations of the 4100.

THE OPERATOR CONTROLS ARE:

POWER	controls primary AC power to the Terminal.
SPEED	selects either of two pre-set speeds for operation of the Terminal (a third is selectable from rear panel).
ONLINE	causes LINE I/O interface to be activated or de-activated.
PRINTER	causes TERM I/O interface to be activated or de-activated.
SOURCE	selects either TERM I/O or LINE I/O interface for data recording and remote control.
SINGLE	causes one character to be read for each operation of control.
READ	causes Read Mode to be activated or de-activated.
REWIND	causes tape to be rewound. Automatically stops upon BOT sensing.
ENDMODE	used for tape editing and mode changing.
WRITE	causes Write Mode to be activated or de-activated.

THE INDICATORS ARE:

READ	STEADY ON indicates data is being read from tape. BLINKING indicates reading has stopped but tape has not been rewound.
WRITE	STEADY ON indicates Write Mode is active and data received will be recorded. BLINKING indicates Write Mode is inactive but tape has not been rewound. Data will not be recorded.
TERM DATA	STEADY ON indicates data received from TERM I/O interface will be recorded on tape, and remote control can be performed from the TERM I/O. BLINKING indicates tape is being rewound.
LINE DATA	STEADY ON indicates data received from LINE I/O interface will be recorded on tape, and remote control can be performed from the LINE I/O. BLINKING indicates tape is being rewound.
ON LINE	STEADY ON indicates LINE I/O interface is active. OFF indicates LINE I/O interface is inactive. BLINKING indicates Clear to Send (CB) signal is present from modem but ON LINE control has not been depressed. LINE I/O is inactive.
PRINTER	STEADY ON indicates TERM I/O interface is active. OFF indicates TERM I/O interface is inactive.

NOW! UPGRADE YOUR SYSTEM WITH PLUG-IN FLEXIBILITY AND ECONOMY!

One of the highlighted functions of the 4100 Terminal is that it is capable of use as both a data storage unit to supplement and increase the capability of existing operator-oriented data stations, and as a stand-alone unit functioning as a high speed data collection or communications terminal. In conjunction with operator-oriented stations, the 4100 has the ability to instantly update the operational capability of existing CRT display terminals, RS-232B I/O equipment and teleprinters, without any modification of those equipments.

The 4100 Communications Terminal will outperform paper tape systems in both reading and writing capability. Portability and built-in dual interfaces completely adapt the Terminal to any system, including on-line and off-line applications, and incremental or batch processing operations.

You save on cost THREE ways! FIRST, the priced-right low cost of the unit itself. SECOND, the 4100 Terminal possesses operational characteristics identical (but superior) to those of existing paper tape equipment so that these systems can be updated to magnetic tape without costly hardware or systems modifications. THIRD, the line time efficiency provided as a result of off-line data preparation and high speed on-line communication provides untold savings in line time and systems operating costs.

Also available are the Model 4120 (plug compatible to the IBM 2741 Terminal) and the Model 4130 (parallel interface for direct connection to the computer for replacement of paper tape I/O systems).

4100 COMMUNICATIONS TERMINAL SYSTEM INTERCONNECTION

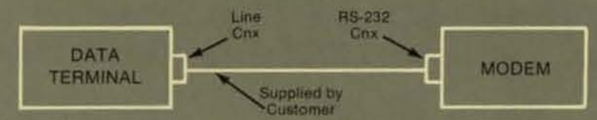
Normal interconnection of the 4100 Communications Terminal is between the Data Terminal and the Modem (or Acoustic Coupler).

The Data Terminal (LINE connector) is connected to the TERM I/O interface of the 4100.

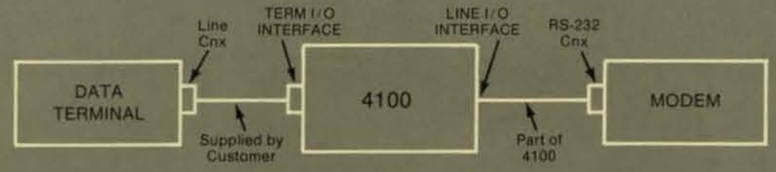
The 4100 (LINE I/O pigtail) is connected to the RS-232 interface of the Modem (or Acoustic Coupler).

PRINTER switch on the 4100 provides a means to activate or de-activate the TERM I/O interface.

ONLINE switch on the 4100 provides a means to activate or de-activate the LINE I/O interface. A Clear to Send (CB) signal must be present from the Modem before this interface can be activated. An internal strapping option is available within the 4100 for applications where the CB signal is not provided.



1. System Interconnection BEFORE Addition of 4100 Terminal



2. System Interconnection AFTER Addition of 4100 Terminal

specifications:

GENERAL PERFORMANCE

SPEED	110 to 300 baud (600 to 2400 optional), switch selectable; internally adjustable
CODE	Models 4100 and 4130—USASC11, 7 level, 1 or 2 Stop bits Model 4120—IBM or EBCDIC, 6 level, 1 Stop bit
TRANSMISSION	Half-duplex asynchronous (start/stop); bit serial (Models 4100 and 4120), bit parallel (Model 4130)
INTERFACES	TERM I/O-EIA RS-232B DB-25S Connector (Teletype 20ma current loop optional), LINE I/O-EIA RS-232B, 8 foot cord with DB-25P Connector
CONTROLS	Front Panel—(POWER, SPEED, ONLINE, PRINTER, SOURCE, SINGLE, READ, REWIND, ENDMODE, WRITE) Rear Panel—(Optional—CR DELAY/DUP, 110-300/1200-2400, RS-232/TTY, ECHO ON/OFF/AUTO)
INDICATORS	READ, WRITE, TERM DATA, LINE DATA, ONLINE, PRINTER
READ/WRITE SPEED	6 inches per second
SEARCH/REWIND SPEED	40 inches per second
RECORDING DENSITY	800 bits per inch
TAPE CAPACITY	70,000 characters, single pass
RECORDING FORMAT	Bit serial modified NRZ, dual-track recording
BOT/EOT SENSING	Automatic
FILE PROTECT	Automatic when cassette tab is removed
NO TAPE IN PLACE	Automatic, inhibit of operations
RECORD LENGTH	Variable, fixed by placement of STOP CODE on tape
OPERATING MODES	Read, Write, Rewind, Search
INPUT BUFFER	MOS type, dual 100 character serial

PHYSICAL AND ENVIRONMENTAL

SIZE	11 inches wide, 8½ inches high and 15½ inches deep, including carrying handle
MOUNTING	Desk Top (19 inch rack-mount optional)
WEIGHT	21 pounds
TAPE CASSETTE	Standard Philips Type Cassette, 300 foot length, 0.15 inches wide, 0.7 mil thickness, certified digital quality
TEMPERATURE RANGE	50° to 110° Fahrenheit
HUMIDITY RANGE	20% to 90% relative humidity without condensation
POWER REQUIREMENTS	115 VAC ±10%, 60 Hz, 150 Watts (230 VAC, 50 Hz optional), 3-wire grounded

options:

- ☐ Carriage Return Delay, Transparent Read/Write Mode
- ☐ Remote Control (customer selected codes)
- ☐ High Speed Search
- ☐ Remote Interrupt
- ☐ Data Edit
- ☐ High Speed (600 to 2400 baud)
- ☐ 20 ma Current Loop Interface
- ☐ Flexowriter* Interface
- ☐ 202 Modem Reverse Channel Controller

*Trademark of The Singer Company

- ☐ Integral Modem (103 or 202 Type)
- ☐ Adapter Cables for teleprinters and various mini-computers
- ☐ 240 VAC, 50 Hz

compatible modems

- ☐ Western Electric 103 Series (110-300 baud)
- ☐ Western Electric 202 Series (1200 baud); or equivalents

For additional information on the 4100 Communications Terminal, contact your TECHTRAN Application Engineer at:

TECHTRAN INDUSTRIES
580 Jefferson Road, Rochester, New York 14623 ☐ Telephone (716) 271-7953

PRINTED IN U.S.A.