

MICRO COMMUNICATOR 177

27 1983



A Milestone in System Design!

MICRO COMMUNICATOR MODEL 177, an innovative microcomputer system for R & D, maintenance and sales engineering applications.

- ★ Surprisingly low cost/performance advantages!
- ★ Portable! Compact and lightweight!
- ★ Ease of operation plus modularity for easy matching with peripherals.
- ★ Seven functions incorporated in single, compact unit:

1. Hard copy (printer)
2. PROM read/write (PROM writer)
3. Data filing (mini data cassette)
4. Character display (18-segment LED)
5. Manual entry (ASCII full keyboard)
6. Editing (Edit keys)
7. Interface (UART)



Power
A power source ON/OFF switch.

Mini data cassette
A minicassette meeting ANSI specifications, its two sides capable of recording about 32K bytes. The record block is 64-byte fixed length.
Memory density: 400 BPI. Data transmission speed: 1500 SPS.

Character display (16 digits)
18-segment alphanumeric displays. Used as data monitor for input buffer to display 16 characters (ASC operation) or 8 characters (BIN operation), both indicated by line numbers. Other than ASCII 64-character displays, CR and LF are displayed with special fonts.

Line number (1 digit)
Indicates to which line of input buffer the characteristically displayed data correspond.
This display is indicated by 1 through 4, since the 64-byte input buffer is divided by (16 characters x 4 lines) in ASC operation. In BIN operation, it is divided by (8-characters x 8 lines), permitting display by 1 through 8.

ROM, ADD, and message display (3 digits)
Also 18-segment alphanumeric displays.
Monitors and displays addresses (hexadecimal displays) of data while the data are being written or read into PROM. Also these 3-digit displays can be employed for various message displays.

BUFF FULL, TAPE, and ROM
An operation monitor display, with TAPE indicating the cassette tape is functioning, and with ROM indicating PROM read/write is operating. BUFF FULL indicates the input buffer (64 bytes) is full.

Printer
A discharge printer for hard copy production, composing characters of 7 x 5 dots. Permanently dry printing is obtained without using ink or ribbons. This printer produces hard copy of data transmitted from the keyboard, cassette tape, PROM, or other on-line systems. Printing automatically starts when **[CR]** is set or transmitted data accumulates to 32 digits.

Tape control and data control keys
For controlling operation of the cassette tape and data blocks:
[RWD] rewinds the cassette tape and **[RHD]** detects head marks of a data series starting from the cassette stopped position until it stops after accomplishing such detection.
[WHD], also starting from the cassette stopped position, records head marks which indicate the end of each data series. This **[WHD]** stops automatically when the designated recording function is completed. When **[RHD]** and **[WHD]** operations are repeated twice, an EOT mark is recorded on the cassette tape. **[BREC]**, which also automatically stops, is for rewinding the cassette tape in reverse from the cassette stopped position. As for PROM, reversing is effected back to the 64th position from the present address.
[PREC] starts from the cassette stopped position, reads the data for 1-record volume, and transfers data to the input buffer. As for PROM, **[PREC]** reads 64-byte data from the present address and transfers it to the input buffer.





I. Keyboard

A full ASCII keyboard console for data input: Small protruded section on the lower side of a key indicates a key top. Shifting is for three stages of up, down, and control. Key pitch is 12.5mm, key touch 55g, and key stroke 1.15mm. Key touch provides a light clicking sensation.

J. Operation

Designates a data mode for the Micro Communicator: Under the BIN mode, all data are handled as binary data and are either displayed or printed hexadecimally (ϕ-F). In this case, keys [ϕ] - [F] become effective on the keyboard. Under the ASC mode, all data are in accordance with the ASCII code.

K. Edit keys

Edit keys are operated when editing input buffer data. The cursor is moved to the designated position () while observing the display: Then, the character at cursor position is deleted ([DELT]) or another replacing character is inserted ([ISRT]).

L. Control keys

These keys are operated to control the Micro Communicator. [DUP] transfers data at output buffer to input buffer. [STA] and [STP] respectively start and stop cassette tape and continuous reading by PROM. [RST] performs initializing of the Micro Communicator.

M. Socket for PROM

A 24-pin DIP socket for PROM read/write. Those PROMs wriple are i2578 and i2716 types.

N. Printer switch

ON/OFF operation of the printer.

O. READ switch

A control switch for effecting data reading, TP for reading data from the cassette tape, and ROM for reading data from PROM.

P. TAP switch

Employed to determine whether to effect (ON) or (OFF) data writing to cassette tape.

Q. ROM W switch

ON/OFF switch for determining initiation or noninitiation of data writing into PROM.

R. LINE switch

Determines operation mode of the Micro Communicator (on-line mode/off-line mode).

S. ROM selection switch

Determines the type of ROM inserted into socket; i.e.—
A: i2758 type PROM (1k bytes)
B: i2716 type PROM (2k bytes)

T. Connector for on-line connection

Standard connectors for interfacing 20mA current loop and TTL levels.

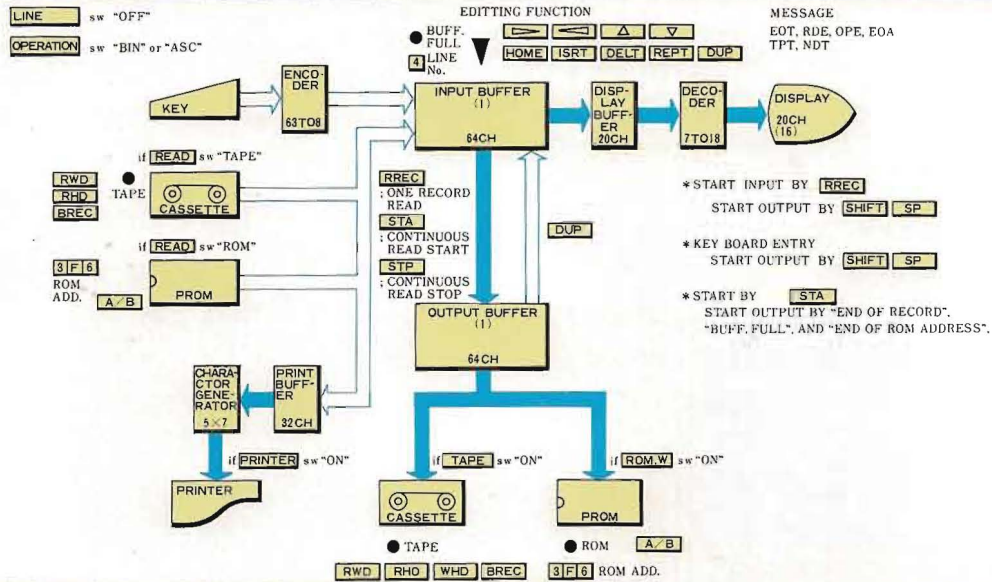
U. Baud rate change switches

Selection switches for communication speeds (75, 110, 150, 300, 600, 1200, 1500, 2400, 4800, 9600, 19200 BPS).

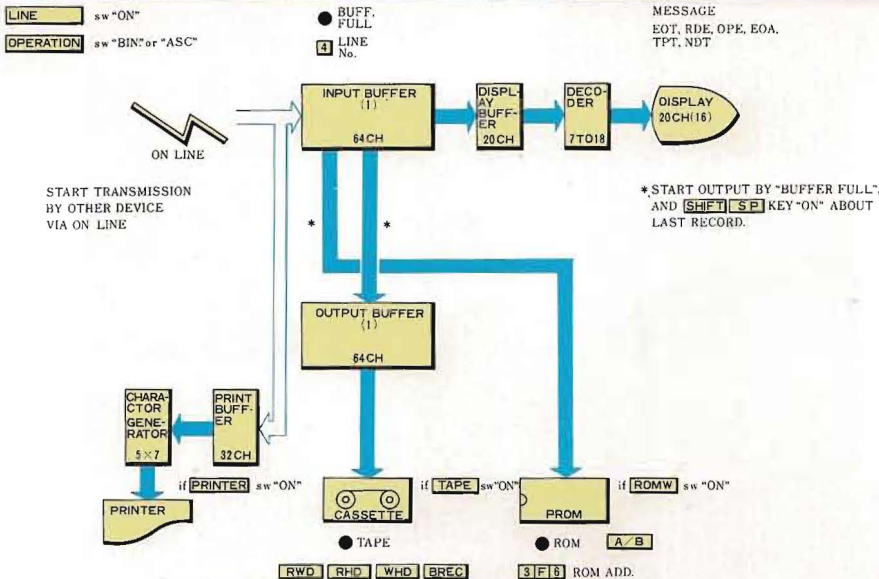
V. Timing selection switch

Switched ON when connected (from the socket for PROM) to optional systems whose access time is less than 450ns for input and output operations.

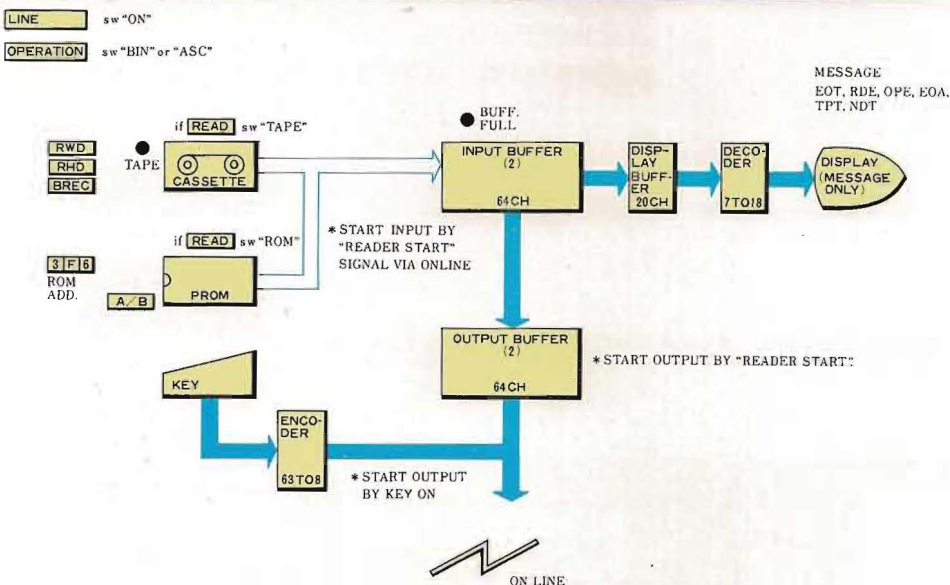
FUNCTION: DATA ENTRY·DATA EDIT (OFF-LINE MODE)



(A) DATA INPUT (ON-LINE MODE)



(B) DATA OUTPUT (ON-LINE MODE)





General specifications

Dimensions	: 80(H) x 300(W) x 210(D)mm
Weight	: 3.9kg approx.
Power source	: AC 100V ± 10V 1A 50Hz-60Hz
Storage temperature	: -10°C~55°C (Tape 4°C~45°C)
Operational temperature	: 5°C~40°C
Operational humidity	: 20%-80% (no dewing) relative humidity

Sectional specifications

● Printer

Digit number	: 32 digits/1 line
Characters	: 5 x 7 dot matrix, discharge-destruction method
No. of printed characters	: ASCII 64 letter type + 2 letters
Character size	: 2.5(H) x 1(W)mm
Printing speed	: 0.5 sec./line
Printing paper	: Silverno 890-2B (Honshu Paper Mill product), aluminium-vapor processed discharge-destruction paper
Head life	: About 30 million letters (replaceable)

● Keyboard and control keys

Key arrangement	: ASCII standard type
Key shift	: Up/down + control (except control keys)
Key pitch	: 12.5mm
Key touch pressure	: 55±35g
Key stroke	: 1.15±0.25mm
Key "feel"	: Clicking sensation
Other operation switches	: ON/OFF slide switch or seesaw switch

● Display

Digit number	: Data display (16 digits), line number display (1 digit), ROM address, and message display (3 digits)
Display method	: 18 segments
Display characters	: ASCII 64 letter type + 2 letters
Method for other displays	: LED lamp

● Mini data cassette

Tape	: ANSI specifications digital minicassette (width 3.81mm, length 15.2m)
Writing method	: F2F method
Recording density	: 400 BPI
Data transmission speed	: 1,500 BPS
Tape speed	: 3.75 IPS

● ROM writer

Writing device	: i2758 or i2716 type PROM
Writing speed	: 55 ms/1 byte

PROVIDED WITH MICRO COMMUNICATOR:

Roll Paper	: 4 rolls
Paper Shaft	: 1
Mini cassette Tape	: 2
Quality Assurance	
Test Data	: 1 set
Operation	
Manual	: 1 copy
Eraser	: 1
PROM (B2716-2)	: 1
Interface Cable	: 3 meters

 **Ai Electronics Corp.**

International Marketing Division.

2-8-16 Shimomaruko, Ohta-ku, Tokyo 146, Japan
 Telephone : Tokyo (03) 758-8161
 Telex : 246-6176 AIELEC

