

IBM's 2780 Data Transmission Terminal and 3780 Data Communication Terminal are designed for large volume batched card data transmission and printer or card punch reception. These terminals use binary synchronous communications (BSC) procedures which have become industry standards for a broad range of medium and high speed data communications equipment.

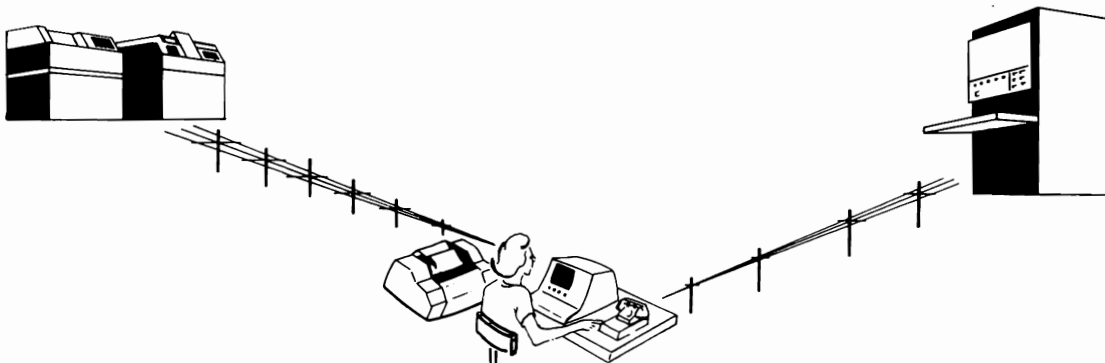
Wang's 2780/3780 Emulation software, in conjunction with a communications controller, allows particular Wang systems to communicate with host computers, compatible terminals, or other Wang systems which support the 2780 or 3780 protocols. The 2780/3780 software requires no modifications to existing host software; therefore, a Wang system can be integrated into a communications network allowing data flow to and from remote sites.

Unlike IBM's 2780 and 3780 terminals, a Wang system is not limited to input from a card reader and output to a printer or punch. Instead, Wang's 2780/3780 emulation supports transmission from a keyboard, card reader, disk or diskette and reception to a printer, disk or diskette. Data entered offline to a Wang disk or diskette may be verified and preprocessed prior to batch transmission, thereby ensuring accuracy and reducing online data transmission requirements. Print files may be spooled to disk or diskette for subsequent printing when convenient. Any punch streams are automatically received to disk or diskette. Offline processing, updating, and reformatting of data received to disk/diskette can occur, when needed, using application programs written in Wang's powerful BASIC language.

The industry standard 2780 and 3780 protocols include both cyclic redundancy checking (CRC) and retransmission procedures which essentially guarantee that received data contains no errors introduced by transmission difficulties. The reliability, compatibility, extensive input/output capabilities, and CRT displayed operator prompting messages built into Wang's 2780/3780 Emulation software provide the user with a versatile package suited to a wide variety of communications needs.

#### FEATURES

- Transparent or non-transparent transmission
- Line speeds up to 7200 bps (bits per second)
- Space compression or horizontal tabbing (3780)
- Horizontal tabbing (2780)
- Transmission from keyboard, card reader, disk or diskette
- Reception to CRT, printer, disk or diskette
- Single or multi-record blocking
- Extensive error checking



## 2780/3780 EMULATION SOFTWARE UTILITY

# DATA SHEET

## SPECIFICATIONS

### Package Number

195-2057 (BSC-1).

### Emulation

2780 or 3780 protocol.

### Line Discipline

BSC point-to-point operation on dial-up or leased lines (half duplex).

### Line Speeds

1200, 2000, 2400, 4800 or 7200 bps.

### Modems

For local connections up to 100 feet (30.5m) at speeds up to 7200 bps, a 2228N null modem (available from Wang) may be used with RS-232-C cables.

For connections up to 25 miles (40.2 km) over private lines, Short Haul modems may be used. For connections over common carrier telephone lines, the following Bell or equivalent modems may be used:

Bell 212A for 1200 bps.

Bell 201A for 2000 bps.

Bell 201C for 2400 bps.

Bell 208A for 4800 bps (leased lines).

Bell 208B for 4800 bps (dial-up lines).

### Controller

Depending upon the Wang system, one of the following communications controllers is required: 2228B or Option 62B.

### Hardware

Disk or diskette based system:

- PCS II with Option 62B.
- 2200 Workstation with Option 62B.
- 2200T, VP or MVP with a 2228B.

### Memory Required

8K for normal operation.

16K for card reader and disk/diskette support or transmit file name validation.

### Code Translation

From ASCII to line code (EBCDIC) for non-transparent send (no translation for transparent send).

From line code (EBCDIC) to ASCII for non-transparent receive (optional translation for transparent receive).

### Error Detection

CRC block checking.

### Record Length

Variable (up to 175 bytes).

### Block Size

Up to 400 bytes for 2780 and 512 bytes for 3780, including line control.

### Communicates With

- Any host system supporting IBM 2780 or 3780 protocol.
- A 2780/3780-like terminal.
- Another Wang system with 2780/3780 emulation.

### Operation Modes

- Keyboard, card reader or disk/diskette send (non-transparent).
- Card reader or disk/diskette transparent send.
- Printer or disk/diskette receive (non-transparent).
- Disk/diskette transparent receive.
- Attention (to specify a receive file name).

### Transmits From

- Keyboard
- Card reader
- Disk or diskette.

### Receives To

- CRT
- Printer or optionally spooled to disk/diskette for print data streams.
- Disk/diskette (with optional translation to ASCII) for punch data streams.

### Disk File Format

Wang's TC file format supporting variable length records is used for disk/diskette transmission or reception.

### Customizing

None required for described operation.

### Options

- Single- or multi-record blocking.
- Print streams to printer or disk/diskette.
- Punch streams to disk/diskette with or without translation to ASCII.
- Space compression or horizontal tabbing (3780).
- Horizontal tabbing (2780).
- Multiplexed disk (yes or no).

*Wang Laboratories reserves the right to change specifications without prior notice.*



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