IBM 3770 Data Communication System
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Description

The IBM 3770 Data Communication System is a family of microcode controlled, operator oriented, remote terminals and input/output devices.

The terminals consist of various combinations of keyboard, printer and control unit, housed in a desk type console. These terminals can be upgraded in the field to meet users needs for batch operation, input/output attachments, operator aids and throughput enhancements.

The 3770 Data Communication System consists of the following units:

3771 Communication Terminal       Models 1 & 2
3773 Communication Terminal       Models 1 & 2
3774 Communication Terminal       Models 1 & 2
3775 Communication Terminal
3782 Card Attachment Unit         Models 1 & 2
3784 Line Printer

Terminal Description

3771 Models 1 and 2

Model 1 has a 40 character per second (c.p.s.) bi-directional wire matrix printer and a capacitive coupled keyboard. The printer in the Model 2 can print 80 CPS bi-directional. These terminals are suitable for interactive communications and with the addition of optional devices can be used as card batch terminals.

Optional Features

- Communication Driver with or without internal clock.
- Operator Identification Reader.
- 1200 BPS Integrated Modem.
- BSC Mode, Point to Point Operation
- BSC Multipoint Operation.
- Audible Alarm.
- Keylock.
- Variable Width Forms Tractor.
- Extended Work Surface.
- Door Keylock.
- External Modem Attachment up to 4800 bps.

In addition, the user can order one of the following:

3501 Card Reader Attachment      Speeds up to 50
3521 Card Punch Attachment      cards per minute.

3773 Models 1 & 2

Model 1 features a matrix printer with a speed of 40 c.p.s., a capacitive coupled keyboard, and flexible disk storage with a capacity of 242 thousand bytes.

The printer on Model 2 can print 80 CPS bidirectional. Both models are suitable for interactive communications but are intended primarily as batch output terminals.

Optional Features

3773 offers the same features as 3771 with the exception that the 3501 Card Reader and 3521 Card Reader/Punch cannot be attached.

3774

Highlights of the 3774 Communication Terminal, include a capacitive coupled keyboard and an 80 CPS bi-directional wire matrix printer. Optional features tailored to fit individual customer needs make this device a multi-media batch terminal.

Optional Features

All of the features offered for 3771 and 3773 are available on 3774. In addition, the following options may be ordered:

- 2400 BPS Integrated Modem
- 2502 Card Reader Attachment
- 242K Byte Flexible Disk Storage
- Second 242K Byte Flexible Disk Storage
- Remote Power Off
- 3784 Line Printer Attachment (3774 only)
- External Modem Attachment up to 4800 BPS

3775

Like the 3774, this terminal is designed for multi-media batch operations. The 3775 has available the same keyboard and optional features (except 3784). This model has an 80/120 line per minute belt printer rather than the wire matrix printer used on the other models.
Photos are of design models

3771 Communications Terminal with wire matrix printer

3775 Communications Terminal with belt printer.

3773 or 3774
Communications Terminal with wire matrix printer.
(these terminals are identical in appearance)

3521 Card Punch Unit mounted on
3782-1 Card Attachment Unit.
Serviceability

The 3770 Data Communication System offers the latest servicing techniques. Functional packaging of Field Replaceable Units allows for rapid fault isolation and repair.

Serviceability features include:
- Resident Diagnostic Exercisers
- Problem Recovery Procedure (PRP)
  which will assist the customer in identifying the failing unit within the system
- Error Log Printout
- MAP Charts
- A comprehensive "off-line" diagnostic package
- Integrated Service Manuals
- High-level System Diagrams
- Communication Wrap Tests
- Large Scale Integration (LSI) functionally packaged for minimum FRU's
- No Scheduled PM.

The main service feature is the "off-line" diagnostic package. Each terminal and the line printer will have a diagnostic cassette tape shipped with it. CE's servicing 3770 will have a diagnostic cassette tape reader, adapter card with cable, and a latched indicator card all of which can be stored in a convenient carrying case. When the tape reader is connected, the CE will have options of running all or selected diagnostic tests, running these tests with or without manual intervention or repeating a failing loop. The MAP charts will advise the CE when and how to use the diagnostic tests.

These features should allow the CE to repair units of the 3770 system, without other customer resources.

System Technology

- Large Scale Integration (LSI)
- Wire Matrix Printer
- Belt Printer
- Flexible Diskette Media
- Electronic Capacitive Coupled Keyboard

CE Career Path

The 3770 Data Communication System is a "Data Recording" CE career path product.
Photos are of design models

3782 Card Attachment Unit Models 1 and 2

The 3782 Models 1 and 2 are not terminals but do attach to various terminals and support card oriented input/output devices as outlined in optional features. 3782 Model 1 provides DC power and acts as a convenient stand for the 3521 Card Punch Unit.

The 3782 Model 2 is a control unit, it also provides DC power and acts as a stand for the 2502 Card Reader.

Optional Feature Model 2

Optical Mark Read (OMR) In conjunction with the same feature on 2502 Card Reader.

There are no optional features for Model 1.

3784 Line Printer

The 3784 Line Printer provides expanded printing capability for the 3774 Communication Terminal.

The 3784 features an 80/120 line per minute belt printer similar to the one used in 3775. Also, 155 lpm with 48 characters. The 3784 can be serviced in an "off-line" mode using the diagnostic package.

Basic Features

All of the terminals and the line printer use a common controller with microcoded functions. Synchronous Data Link Control discipline is used in communicating to the host system. Operator panel features include sixteen light emitting diode indicators and a three position digital L.E.D. display. Six toggle switches which enable the operator to exercise control functions, such as altering data on a disk file are included on the keyboard operator panel.

System Attachment

All 3770 Terminals can communicate with all System /370 Models. They are attached via teleprocessing lines to a 3704 or 3705 or by communication adapters on Models 115 and 125. System programs supporting 3770 are DOS/VS, OS/VS1 and OS/VS2.