Latency time: 25ms (2400 r.p.m disc speed).

Recording density:
765 b.p.i inner track (track no. 0).
1105 b.p.i outer track (track no. 202).

Total number of tracks: 200 +3 spare.

Max. number of units per system: 8.

Operating temperature: 15·5 to 32°C (60°F–90°F).

Humidity, operating: 10–80% relative.

Vibration operating: 0·15g in range 15–300Hz indefinitely.

Power requirements- 415V a.c ±10%. (line to line) 3ph. Frequency: 46–52Hz. Loading: 0.86kW. Surge current: 8A max.

Dimensions:

Height	103·5cm	(40¾in.)
Length	91·5cm	(36in.)
Width	61cm	(24in.)
Weight	218kg	(480lb)

Discpack: Type IBM1316 or equivalent, removable and inter-changeable between units.

Discs per pack: 6.

Surfaces available: 10.

Diameter: 14in. nominal.

Weight: 10lb.

Full details are given in TD3X.

Disc Store

X4000 Video Data Terminal

The Marconi video terminal system represents a significant advance in peripheral equipment for real time multi-access computer operations. Providing a means of direct computer interrogation and bulk information transfer, without intermediate card or tape preparation, the video terminal is capable of presenting data in an immediately readable form. The inherently high speed operation of the equipment permits interrogation to take place efficently via local or remote transmission links, thus offering a long distance time sharing capability.

The main equipment consists of a type-writer keyboard linked to a cathode ray tube display unit, providing facilities for the composition, editing, transmission and reception of alphanumeric messages of predetermined length. The terminal dis-plays data entered by the keyboard on the tube face, and contains integral dynamic storage and stroke writing character generation, enabling this data to be refreshed at a sufficently high frame repetition rate to maintain a flicker and jitter free display.

Displayed information may be edited and 'formatted' using the keyboard editing controls, which incorporate compre-hensive erase, insert and delete facilities for single characters or whole lines. Messages for transmission, which may be placed at any position in the screen, are bracketed by special start of text and end of text symbols, thus permitting a series of questions and answers to be assembled on the screen, without waste-fully repetitious transmission.

Data is transmitted under control from the store using ISO/CCITT standard codes, speeds and procedures to a line transmission modem in the remote case, or computer interface in the local case, and replies received from the same medium in a similar manner. Error control includes longitudinal and vertical parity checks, and message format verification before transmission by the terminal is a standard feature.

Similar facilities are provided for the reception of messages, and the computer has complete control over the positioning of data on the screen, by means of special control codes injected at suitable points in the text. The computer may thus choose to erase existing data, or chain the replies immediately after the query. Alternatively the cursor manipulation functions permit the screen to be split, thus allowing two independent sets of information to be serviced, and existing data may be rolled or scrolled from any line up and down the screen at will. Furthermore, the computer may assign certain areas of the display as protected data which cannot be altered by the operator. Since data within protected fields is not retransmitted from the terminal, a considerable reduction in line time is achieved by sending variable data only in these circumstances.

As a means of injecting high priority messages, the processor override function causes the computer to take complete command of the terminal transmission and reception circuits. Thus the processor may, at any time, interrupt the terminal operator where circumstances demand priority access.

A terminal network may be configured as a single terminal dedicated to a line, or as a cluster of up to 32 machines, in any mixture of character capacities, sharing a line. A line expander module acts as the necessary interface between the modem and a terminal cluster.

A range of data adapter units and special computer interfaces complete the system. These units permit a choice of transmission method to suit particular needs, and provision is made for the connection to certain defined commercial computers commonly used in multi access systems.

The System contains three basic video terminal units, with character capacities ranging from 288 to 1152 characters per screen. Each model has a choice of one of three transmission interfaces, parallel, asynchronous or synchronous, each serial interface having two optional operating speeds.

The line expander module for use with remote cluster systems, has a maximum machine capacity of 32 terminals. Cluster sizes may be increased where data traffic conditions permit by multidropping and additional line expanders up to a total of 64 machines.

The data adapter units are provided in three forms suitable for local to computer working, remote asynchronous or synchronous data transmission. In the remote cases, a choice of operating speed is available and the data adapters all have a common input interface.

The computer interface units, similarly, connect to this common interface and can be provided for many commercial machines in common usage. In some cases, these machines offer standard data transmission operating systems, and the compatibility of the Marconi system with ISO/CCITT standards will permit direct connection without the special adaptor and interface units outlined above.

Features

Low cost value engineered design.

Compatibility with ISO/CCITT standards.

Executive styling.

Video Data Terminal

Advanced microcircuit technology.

High reliability and maintainability standards.

High definition display tube.

Sophisticated Editing Facilities.

Comprehensive remote text manipulation.

Wide equipment range.

Data summary

Function	*4020*	*4050*	*4090*
Display features			
Character capacity	288	576	1152
Display format:			
(a) Lines	8	16	16
(b) Chars/line	36	36	72
Character set:			
(a) Alpha A–Z	26—All models		
(b) Numeric 0–9	10—All models		
(c) Symbols	4—All models		
(d) Punctuation	10—All models		
(e) Graphic symbols	13—All models		
Tube size (diagonal inches)	8½	11	11
Phosphor P.31 Green	All models		
Frame repetition rate			
30 frames/sec. minimum	All models		
Keyboard features			
Composing:			
(a) Alpha A–Z (U/C)	26—All models		
(b) Numeric 0–9	10—All models		
(c) Symbols	2—All models		
(d) Punctuation (10)	10—All models		
(e) Graphic symbols (14)	13—All models		
(f) Space	All models		
Editing:			
(a) Cursor movement (7)	7—All models		
(b) Erase (2)	2—All models		
(c) Delete	3—All models		
(d) Insert	3—All models		
Layout:			
ECMA standard alphanumeric	All models		
Interlocking: Electronic	All models		

Transmission/Reception features (all Models)

Keyboard:
- (a) Controls 3
- (b) Indication 4

Transmission methods:
- (a) Local parallel 10–50K bytes/second
- (b) Remote asynchronous 600–1200 baud
- (c) Remote synchronous 2400–4800 bits/second

Error control:
- (a) Character parity
- (b) Block Parity
- (c) Auto retransmit
- (d) Format verification

Transmission procedures (LS)/TC97/SC96

Modem interface (serial transmission only) CCITT V24

Equipment Configuration

Local installations: 32 terminals per parallel data adapter.

Remote installations: 32 terminals per line expander module.

Distance limitations:
- (a) Terminal to PDA—2000ft.
- (b) Terminal to LEM—2000ft.

General

Safety: BS 3861

Environment:
- (a) Temp 0–40°C
- (b) Humidity 90%

Power supplies:
- 100–125V a.c
- 200–250V a.c
- 45–65Hz