

POLY SYSTEM OPERATING MANUAL

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New Zealand Limited

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1. HARDWARE DESCRIPTION

(A) HARDWARE UNITS

A POLY system has the following units:

- i) Network Control Unit (POLY DRIVE)
- ii) Printer
- iii) One or more POLY units

1. NETWORK CONTROL UNIT (POLYDRIVE)

This unit controls the POLY system and houses the floppy disk facility.

All POLY units link to the Network Control Unit via a communications cable.

The printer connects directly to the Network Control Unit. The function of the disk is to provide, for all POLY units access to a single disk storage system and to a printer.

Requests for disk access (both read and write) are queued by the Network Control Unit. Processing of the queue is designed to provide an even distribution of service time to all requests currently on the queue.

The Network Control Unit also automatically controls and records the status of the network system.

Specifically, POLY units may be added or removed from the system without the system being powered down. This enables faulty units to be removed from the system without affecting the remainder of the system.

The single drive Network Control Unit houses one eight inch, floppy disk, labelled 0. The dual drive Network Control Unit houses 2 eight inch floppy disks labelled 0 and 1.

On the door catch of each drive, there is a small red light. Whenever information transfer is being carried out, the light on the door catch of the appropriate disk drive glows.

No attempt to remove a disk should be made when one of these lights is glowing.

Control of the disk unit is limited to:

- a) an ON/OFF switch

The ON/OFF switch is located on the rear panel of the unit. A neon lamp indicates when the power is switched on.

- b) insertion/removal of the subject disk from drive 0 and #1.

The manipulation of the disk units is covered in detail later in this section.

- c) a reset button

The reset button is located on the rear panel to the right of the network socket.

Only three external connections are permitted to the disk unit. These are:

- a) 230v Power Source

Connection of the 230v power source is via the attached cable and plug.

An ON/OFF switch on the rear panel controls the power supply. When the power is switched on, a neon lamp glows. This lamp is located next to the power switch. A power fuse is removed by unscrewing the plastic cover and withdrawing the fuse.

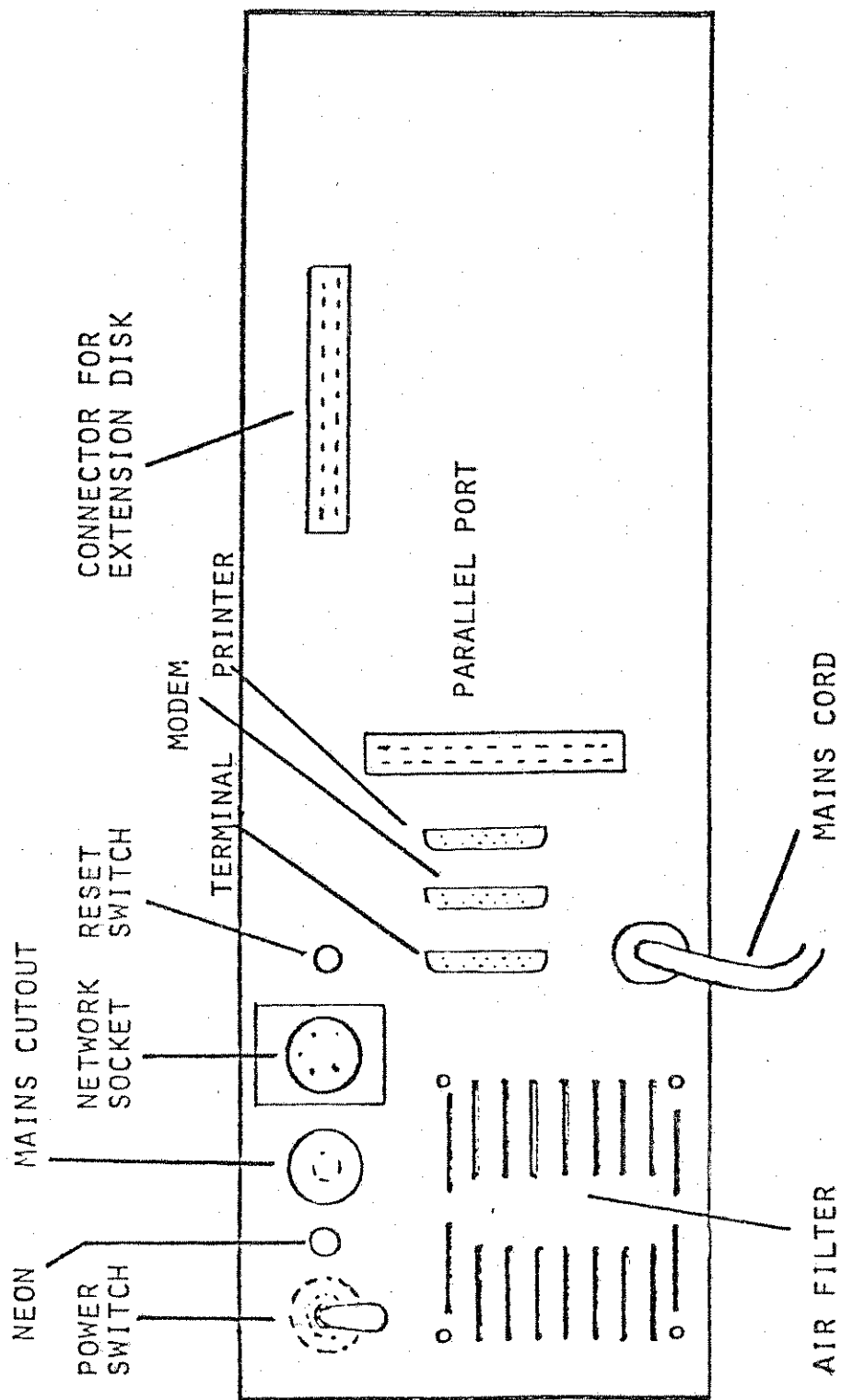
- b) Printer

Connection of the Printer is via a ribbon cable and oval shaped, multi-pin connector. The connector is a push fit and the shape excludes any possibility of incorrect orientation.

- c) Communications Link

Connection of the network cord is standard in that all POLY units have an identical facility. The connector is circular and has a locking key to prevent accidental withdrawal and incorrect orientation.

The first computer in the system must connect to the disk unit.



POLY 1 DISK/NETWORK CONTROL UNIT (BACK)

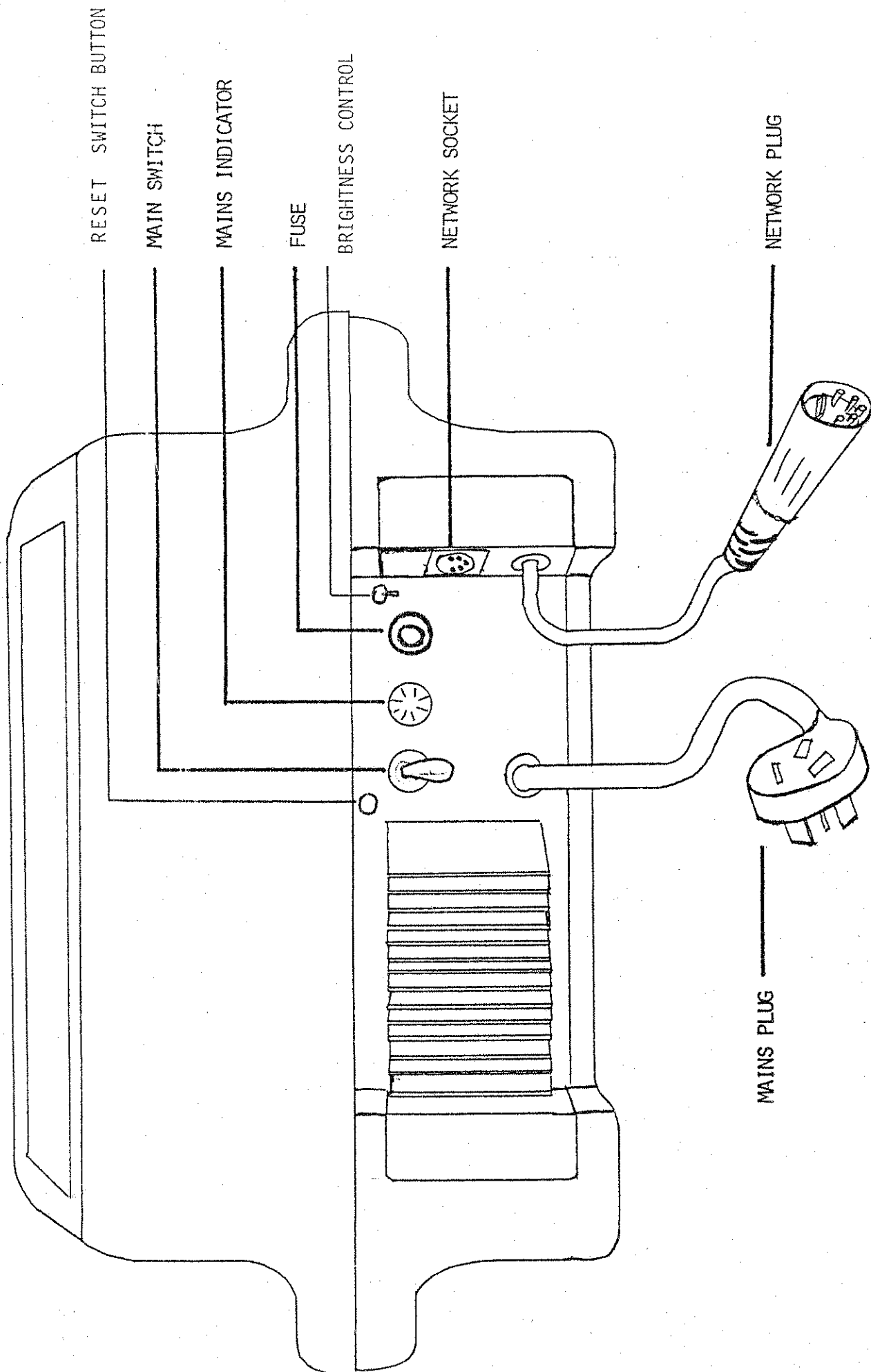
2. THE PRINTER

A single printer is shared by the system under the control of the disk unit.

The Printer links to the disk unit via a flat ribbon cable and an oval connector.

A range of printers may be connected directly to the system. For the printer supplied, a separate manual is included and covers:

- i paper threading instructions
- ii instructions for changing the ribbon
- iii the printer functions such as:
 - a) form feed
 - b) advance to top of form
- iv power connection, power switch and fuse facilities.



RESET SWITCH BUTTON

MAIN SWITCH

MAINS INDICATOR

FUSE

BRIGHTNESS CONTROL

NETWORK SOCKET

MAINS PLUG

NETWORK PLUG

3. THE POLY UNITS

Each POLY unit consists of a colour screen and keyboard enclosed in a single case.

The POLY may be operated on its own (Standalone Mode) or, more usually, as part of a network centred on a Network Control Unit (POLYDRIVE).

In particular, interfacing with peripheral units such as printers and disk storage devices may only be achieved via the disk control unit.

The screen offers full colour together with text, high resolution graphics and mixed text and graphics, as a means of material presentation.

The keyboard is a standard QWERTY keyboard together with a range of special purpose keys (see diagram). The special keys are as follows:

ENTER These keys must be used to terminate any line of input.

EXIT Exit - depressing the key, using the SHIFT enables the
BACK exit facility. It will terminate the current
 operation and may be software defined to return
 to a menu screen.

Back - depressing the key without shift enables the
 user to return to the previous screen display.
 A software - defined key.

REPEAT Next - Is used with the shift and enables the user to
NEXT go forward to the next screen display.

Repeat - Is used without shift to repeat the current
 screen exercise.

Both are software defined keys.

PAUSE Using this key causes the program currently executing
 to be interrupted. The program may be restarted by
 pressing any key.

SHIFT Keys which carry double captions require the use of
 this key to activate the "upper" caption. The SHIFT
 key must be held down while the key with the required
 upper caption is depressed.

CAPS LOCK This key locks when pressed, but will be released when
 pressed again. When depressed all alphabetic
 characters will appear in upper case.

ARROW KEYS These four keys have two functions:-

- 1) Movement of the cursor, eg on the MENU of courseware disks.
- 2) Some user programs permit entry of text. The use of these keys permits the position of the cursor to correct the text. When programming in POLYBASIC, or when making any input in response to an input prompt, the left and right arrow keys permit corrections to be made.

EDIT KEYS These keys are used for editing either text or program source code.

Line Line

INS DEL

Char Char) Line Insert and Delete are used with the shift key;

Character Insert and Delete are used without the shift key. These keys are used extensively when editing.

CALC

Depressing the CALC key using the shift makes the computer useable as a calculator. This facility is available during the use of standard software. When depressed, the user program is interrupted and one portion of the screen is then cleared to show the operands of the calculation.

Once the calculation is completed, the user presses the CALC key again and the user program is restored and continued.

HELP

Depressing the HELP key will produce expanded error explanations. It may be software defined to provide useful information (as with menus).

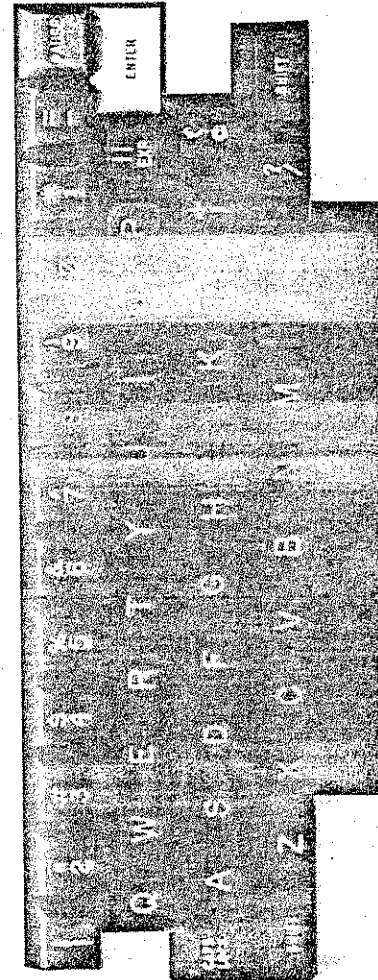
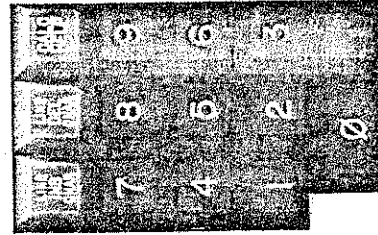
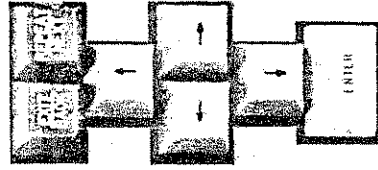
The POLY unit has all external connections located on the rear panel. These are:

a) 230v Power Source

Connection of the 230v power source is via the attached cable and plug. An ON/OFF switch on the rear panel controls the power supply. When the power is switched on, a neon lamp glows. This lamp is located next to the power switch. A power fuse is located on the rear panel. The fuse is removed by unscrewing the plastic cover and withdrawing the fuse.

b) Communications Link

Connection of the network is via a circular connector.



The withdrawal and incorrect orientation is controlled by a catch on the plug and socket.

c) Optional RS232 Port

Standard POLY units may be field upgraded to support an RS232 serial port to which many peripherals may be directly attached. The connectors for the port are the same as those for the printer.

THE NETWORK

* The POLY system is designed so that the computer units all share a network control unit (POLYDRIVE) and a printer. To enable this, all POLY units must link to the network control unit. This linking is achieved by linking from POLY unit to POLY unit to form a chain or network. The first POLY only links to the network control unit.

* POLY units may be added to or removed from the network at any time. To carry out the removal or addition, the chain must temporarily be broken. Each POLY has a cord terminated by a plug, which plugs into a socket in the previous POLY on the chain.

* Each POLY has a socket which accepts the link from the next POLY in the chain. The link cord and plug is permanently attached to the POLY (a POLY may be plugged to itself without any damage!).

* Requests for information from the disk are controlled by the network control unit. Requests for use of the printer are satisfied by storing a copy of the printed output on disk (ie the material is spooled). The information is then printed from the disk by the Network Control Unit.

* The network is controlled by the Network Control Unit. The control begins when the disk unit is switched on and a disk containing the operating system is inserted into drive 0. The POLYDRIVE then asks for details of the date and the time from the first POLY to log on. The information is entered as part of the LOG ON procedure (see Chapter 3).

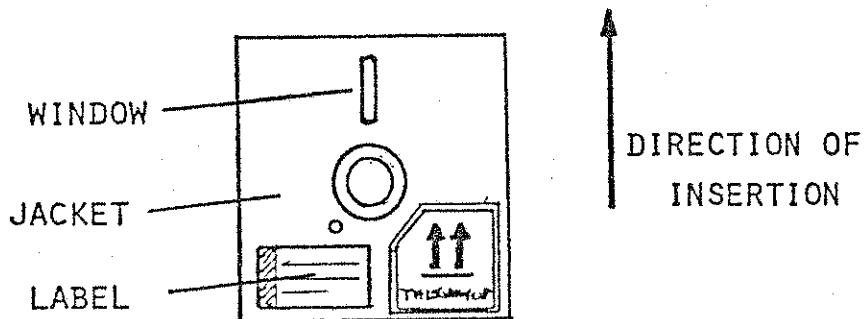
* If the network is broken while activity is taking place, information may be lost. Full, automatic recovery in this situation is not provided and the POLY's involved may need to LOG ON to restart.

C. USE OF DISKS

1. General Background

* The disks used by the system are eight inch, double sided, single density.

* Each floppy disk is enclosed in a special paper jacket. Access to the recording surface is via a cutout window in the jacket.



* To rotate the disk within the jacket, access to the centre of the disk is provided by a central, circular cutout in the jacket.

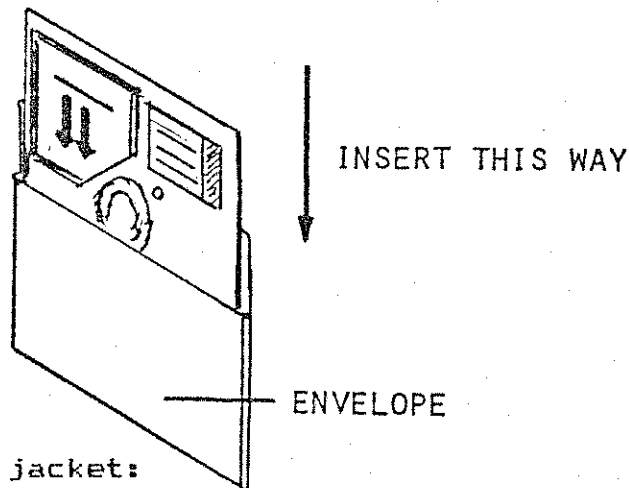
* A small cutout offset and close to this central cutout provides timing information.

* All cutouts on one side of the jacket, have corresponding cutouts on the reverse side.

* Some types of disk have a notch on the edge facing the direction of insertion. Special sticky tags are provided to cover this notch. When covered, the disk may be written to and read from. When uncovered, the disk may only be read from.

2. Storage and Labels

When using the disks, never touch the exposed recording material with fingers and avoid any dust settling on the surface. In particular keep the disk in the supplied paper envelope, inserting the disk into the envelope so that the oval cutout enters first (see diagram) and the label faces "outwards".

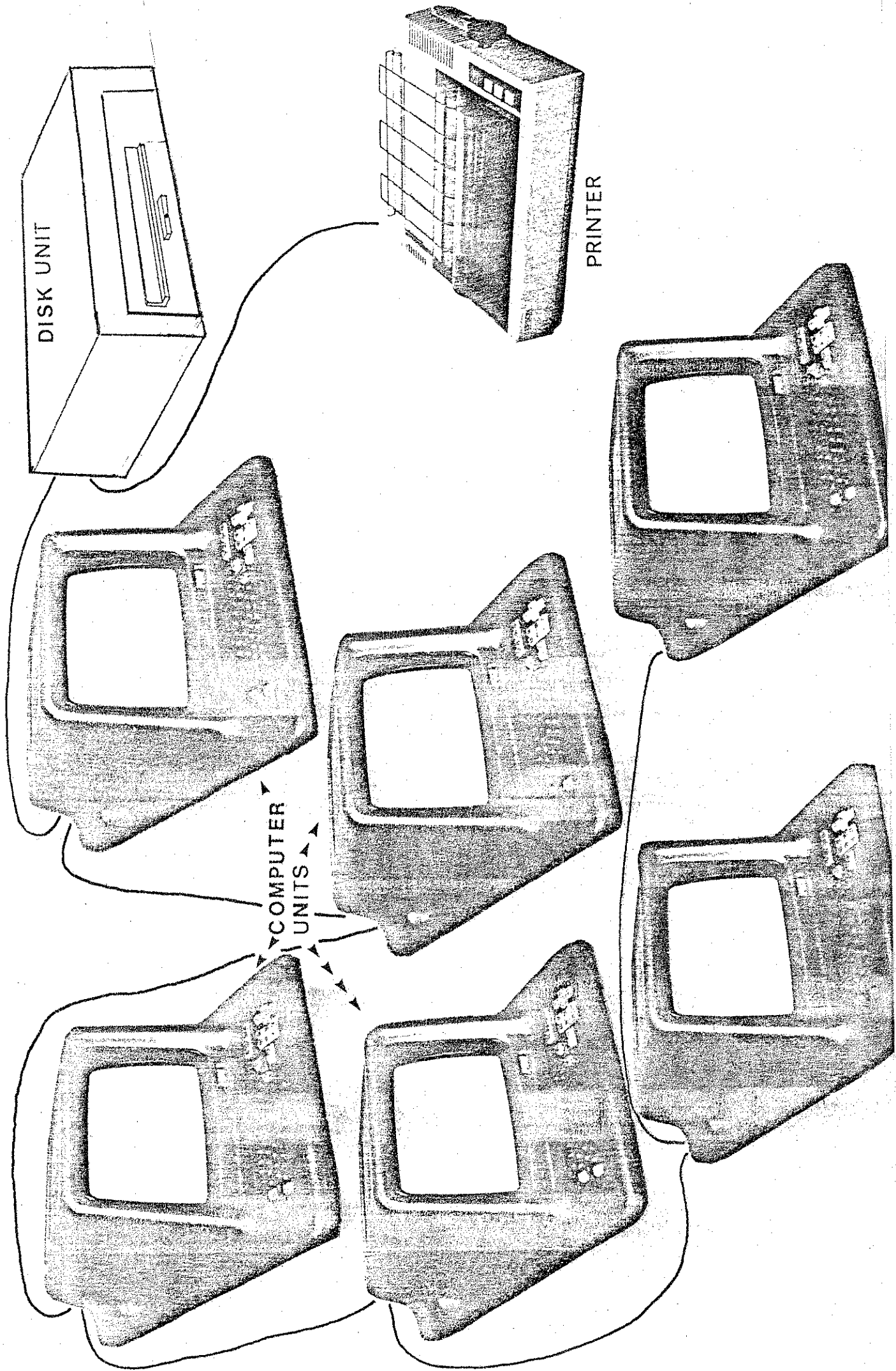


The label on the disk jacket:

- a) provides identification of the disk
- b) provides assistance in the orientation of the disk for insertion into the drive.

NEVER write on this label with ballpoint pen or pencil as these will damage the disk surface/

To mark the label use felt pen.



3. Using the Network Control Drives

a) Single Drive Network Control Unit

1. Ensure that the red light on the front of the drive is extinguished (if the system is already in use).

The red light comes on when the latch is depressed. It will remain on until after the Disk Operating System is loaded.

2. Depress the release catch.
 - the disk door will open.
 - any disk currently inserted will be ejected outwards (place this disk in its paper envelope and put carefully away before proceeding further).
3. Remove the required disk from its envelope.
4. With the label uppermost and the oval cutout facing the disk slot, gently insert the disk into the drive.

The disk is fully inserted when:

- a) none of the disk jacket is exposed.
- b) gentle resistance is felt to the insertion process.

NEVER force a disk into a drive. If undue resistance is felt draw the disk out and start again.

- c) a faint click is heard.

5. Now close the drive by moving the latch downwards.

b. The Dual Drive Network Control Unit

This is similar in operation to the single drive unit.

2. SETTING UP THE SYSTEM

a) GENERAL POINTS

When setting up the system, the following general points should be considered:

- a) furniture within the room will be required by the systems as follows:
 - 1 desk/POLY unit
 - 1 desk for the disk unit
 - 1 desk for the printer
- b) the furniture must be positioned to allow for:
 - i access to 230v power sources.
 - ii linking of POLY's via the network cable.
(most cables are 2m long)
 - iii pupil participation, especially where more than one pupil per machine is required.
 - iv classroom usage other than that involving the microcomputer.
 - v room lighting - avoid direct sunlight falling across the screen.
 - vi position of cords and cables. Any cords which cross a walkway must be taped to the floor with wide masking tape or be run up and over the walkway in the form of an "arch" using tape to hold the cords in place.
- c) the network control unit must be placed in the most dust free position in the room. In particular keep the control unit well away from blackboards and associated chalk dust.

b) SETUP STEPS

To set up the system:

- 1 position furniture
- 2 place all units as required
- 3 link the first POLY to the disk unit
- 4 link each POLY to the "one before it" in the network.
- 5 connect the printer to the disk unit
- 6 connect all units to a 230v power source. Use distribution boxes (power boards) and extension cords, if insufficient power outlets, power boards are available.

NOTE: a system of ten POLY's will run from a single, 230v 10amp outlet

- 7 ensure that all cables are placed to prevent snagging - use tape to attach cables to floor etc.

3. TURN ON PROCEDURE

1. GENERAL POINTS

When turning ON the system, the following general points should be considered:

a) the steps outlined in section 2 give a suggested "standard approach". Minor variations can be introduced without damage to the system. It is strongly recommended that the steps given be followed.

b) system turn ON may be required:

i at the beginning of a work session

ii after a system failure

iii after a power failure

IN ALL THREE CASES it is strongly suggested that the steps given in section 2 be followed.

c) the turn on procedure involves:

i turning ON power switches

ii insertion of disks

iii fulfilling the LOG ON requirements

The first two steps are covered in Chapter 1. The LOG ON procedure involves entering:

i the user initials and password

ii the date in the form DD,MM,YY (commas optional)

iii the time in the form HH,MM (commas optional)

2. TURN ON PROCEDURE

To turn ON the system

- a) Ensure that all network cables are correctly linked
- b) Ensure that all units are connected to a 230v supply
- c) Ensure that there is paper in the printer
- d) Ensure that all units are switched off (check the switch at the rear of each unit)
- e) Turn on the 230v wall outlet supplies
- f) Turn on each computer - the magenta LOG ON screen will appear
- g) Turn on the printer
- h) Turn on the switch on the rear panel of the disk unit
- i) Insert the subject disk in drive 0, making sure that the side with the label faces up
- j) Close drive door
- k) When the 'scratching' has ceased from drive 0, LOG ON to the POLY nearest the disk unit:
 - i) type initials, press ENTER key.
 - ii) type Password, press ENTER key.
(If Password not applicable, press ENTER key)
See point 5 for explanation.
 - iii enter date and time as requested
- l) When the first unit has logged on, the users on the remaining computers may LOG ON. These units will indicate "AWAITING LOAD", when the date and time has been accepted by the first unit.
- m) ALL units will then display a MENU.

3. TO BROADCAST

- a) follow turn ON procedure, steps a to k on first unit only.
- b) when MENU screen appears, type the letters BC - the screen will return to LOADING and then the MENU will again appear
- c) select program in the usual manner
- d) all units will then go back to LOG ON screen and load the program
- e) when loaded the LOG ON screen will flash PROGRAM LOADED
- f) all users may then LOG ON in the usual manner

4. OTHER SELECTIONS FROM THE MENU (ON A COURSEWARE DISK)

Pressing HELP provides short descriptions of each module. Pressing HELP again will list other actions, for example, how to select POLYBASIC or TEXT and how to boot up a different menu.

5. POLY PASSWORD

When logging on to the POLY, your initials and Password may be entered. This offers the facility of file protection.

- a) Type your initials as requested. Press ENTER key.
- b) Type a password you wish to use. Press ENTER key.

NOTE: the password will not show on the screen. It cannot be referenced - explanation:

* The password is used under +PROT or PROT to put protection on to a file to prevent access by others.

* To personally protect a file you have saved, type

(from BASIC)	+PROT filename P
(from DOS)	PROT filename P

* If you PROT P a file in this way, it will be protected by the name and password under which you were LOGGED ON at the time the file was protected.

* To access a password protected file again (for reading, altering or unprotecting) you must LOG ON under the same name and password used when you protected the file.

* The initials used when you LOGGED ON is stored in NAME\$.
NAME\$ may be accessed by programs, eg:

```
10 IF NAME$ <> "JAN" GOTO 1000
```

```
"
```

```
"
```

```
"
```

```
1000 ? "You are not authorised to use this  
program!":Wait 500: END
```

* A program has been written, which when run, gives that
POLY access to ALL files whatever the protection !! This
program should be available only to the teacher looking
after the system.

4. TURN OFF PROCEDURE

1. GENERAL POINTS

When turning the system OFF, the following general points should be considered:

a) the steps outlined in section 2 give a suggested "standard" approach. Minor variations can be introduced without damage to the system. It is strongly recommended that the steps given should be followed.

b) the need to turn OFF the system arises in the following situations:

i at the completion of a work session

ii after a system failure

iii after a power failure

c) the turn OFF procedure involves:

i fulfilling the system requirements - either return to MENU or LOGOFF

ii removal of disks from the drives

iii turning power switches on all units OFF

Steps (ii) and (iii) are covered in Chapter 1. The LOGOFF procedure requires the user to type the letters LOG OFF (letter by letter) followed by the ENTER key.

d) if you press the EXIT key (with SHIFT) from the menu, you will return to the LOG ON screen.

2. TURN OFF PROCEDURE

To turn the system off:

- a) press the EXIT key on all POLY's
- b) when all units show either the MENU or the magenta LOG ON screen, open the door of the disk drive by pushing the door release bar.
- c) remove the disk from drive
- d) turn OFF the disk unit
- e) turn OFF each POLY unit
- f) turn OFF the 230v wall outlet supply

3. TO CHANGE COURSEWARE DISK

- a) First, remove the old disk and insert the new disk.
- b) If you are in the middle of a program from the old disk, press EXIT key and MENU from the new disk will load.
- c) If you are in MENU from old disk, type CD and the new MENU will be loaded.

NOTE:

If CD is not typed and pupil selects a program, a message will appear on screen "Program not available"

- d) If you have more than one drive on your system, it is possible to load a menu on another drive by typing, say, D1. The MENU from drive 1 will be loaded.

5. FAULT ANALYSIS AND REPORTING

1. General Description of Faults

There are three levels of faults. These are:

- a) faults, both mechanical and electronic, with one or more units (hardware or network faults)
- b) faults of a processing or presentation of materials nature which arise from errors in the supplied programs
- c) external faults such as power failure to the system

In (a) and (b) corrective action is required. To accomplish this corrective action it is imperative that an accurate report of the fault is submitted. Fault Report Forms are provided and details of how to use these are given later in this section.

The description of the faults and the corresponding corrective action described in this section may involve turning the system either OFF or ON. Where these procedures occur, the turn OFF and ON procedures given in 3.2 and 4.2 should be followed. Clearly where complete power failure has occurred some steps in the turn OFF procedure cannot be followed.

.pa

2. GENERAL APPROACH TO FAULT ANALYSIS

The nature of a fault may be isolated quickly by applying some simple checks. These are:

- a) is the fault a result of power failure?
- b) is the fault a hardware problem?
- c) is the fault a network problem?
- d) is the fault a program problem?
- e) does the fault affect all units in the system or just one unit?

Details of how these checks may be implemented are given in the following sections.

3. POWER FAILURE

Power failure may be local (ie it effects one or more system units) or general (ie it effects all system units)

a. Power Failure Analysis

The steps are:

1) Determine if failure is local or general.

- check the neon lights on the rear panel of each unit.
- check the room lights.

2) If the failure is general, then

- if the room lights are on and the system is without power

CHECK

- the main system supply cord is plugged into the wall and the wall outlet switch is ON
- that the larger of the two buttons on all power boards are pushed down
- the power boards are connected to the wall outlet
- that the fuse for the wall outlet is intact
- if the room lights are out and the system is without power, no action to restore the power can be taken

3) If the failure is local, then

CHECK

- the power boards to which the units is connected, is connected to the wall outlet
- the units are connected to a power board
- that the larger of the two buttons on the appropriate power board is depressed
- that the unit(s) fuse is intact (see section 1 for fuse details)

b. Action to take for General Power Failure

The steps are:

1. turn system off as described in Chapter 4.2
2. turn on a room light and wait until power is restored
3. after the power is restored, wait until any fluctuations have settled (about 2-3 minutes would be sufficient) and then turn on the system as in Chapter 3.2

NOTE:

In the case of a general power failure, it is possible for the power to be restored before any of the steps in section (5) have been actioned. If this happens, the steps in this section should be followed anyway.

c. Action to take for a local power failure

The steps are:

- 1) turn the affected units OFF
- 2) locate source of failure and restore power supply
- 3) turn affected units ON then:
 - log on in the normal manner
 - the MENU will appear and processing may be resumed

4. SYSTEM SEIZURE

System seizure occurs when one or more units stop processing and remain stopped for a significant length of time. Power to the units is maintained and the screen shows details which do not change. The keyboard is inactive.

a) System Seizure Analysis

a) Action to take for system seizure

The steps are:

1. check the network cable from the "first" POLY to the disk unit. Restore if this is removed, and processing will automatically resume.
2. turn OFF disk unit, then turn ON disk unit. System processing will then resume. Some POLYs may remain seized and if so, they should be switched OFF then ON also.

b) Action for one or more seized POLYs

The steps are:

1. check the network cable to each POLY (ensure units are not bypassed or plugged to themselves)
2. turn the unit OFF and then ON
3. enter name and details and processing from the main MENU may resume

5. FAULT REPORT FORMS

a. General Background

The Fault Report Forms are designed to record system faults which require servicing or action remote from the system site.

Specifically it is not necessary to record on the Fault Report Forms details of power failures either general or local. Likewise it is not necessary to record details of incorrect network connection.

Details to be recorded are:

1) mechanical or electronic faults (Hardware)

- eg
 - key not operative
 - disk light never comes on
 - paper cannot be fed into the printer
 - broken cable or connector
 - screen will not come on

2) network faults (Hardware)

- eg
 - system seizes when running a specific program
 - although correctly connected, one or more units are seized

3) program faults

- eg
 - program will not accept correct calculated answer on screen
 - program fails at particular point in processing and an error screen is displayed

In cases 1-3 above only a few examples of the range of possible errors have been given. Log sheet recording should be made whenever any errors in these three areas occur.

b. Fault Report Details

A copy of this form is to be found at the end of this section.

The form should be completed as follows:

1. System Location - give the name of the school or institution etc
2. Name of User - in a school situation this will be the name of the teacher otherwise enter the name of the person using the system at the time the fault occurred.
3. Time - enter the time at which the fault occurred
4. Date - enter the date
5. Type of fault - decide which category the fault fits best
6. Number of units affected - give either a number of units or the word ALL
7. Identifier of unit affected - each unit carries a unique number. Enter this number or leave blank if all units were affected.
8. Program Description - briefly describe the program being used at the time the fault occurred.
9. Program code - if displayed on the screen, enter this on the form, eg PP12TY
10. Screen Number - copy this from the screen if displayed
11. Error in Line Number - copy this from the screen if displayed
12. Error number - copy this from the screen if displayed
13. Description of fault - give as accurate description as is possible of the fault. If the number of the last screen seen cannot be recalled, describe if appropriate the last screen seen.

c) What to do with Fault Report Forms

If a hardware or program fault occurs, POLYCORP would like to know about it. As well as calling your service agent, send us a copy of the Log Sheet, detailing the hardware fault. If the fault is in a program we will take remedial action once we receive your notification.

The location and address of the service agent are specified at the time of system installation.

Polycorp address is - P O Box 30 243, Lower Hutt.

d) Where to keep the Fault Report Forms

The Log Sheets should be kept with the machine so that faults as they occur, can be immediately recorded.

[illegible]

FAULT REPORT FORM

SYSTEM LOCATION		NAME OF USER	TIME	DATE
MODULE NAME AND VERSION		DISK UNIT	0 <input type="checkbox"/>	2 <input type="checkbox"/>
			1 <input type="checkbox"/>	3 <input type="checkbox"/>
TYPE OF FAULT (tick appropriate box)	Hardware	<input type="checkbox"/>	NUMBER OF UNITS AFFECTED (if entire system enter "All")	IDENTIFIER OF UNIT AFFECTED (if only one unit <input type="checkbox"/>
	Network	<input type="checkbox"/>		
	Program	<input type="checkbox"/>		
DESCRIPTION OF FAULT			PROGRAM CODE	ERROR ON LINE NO
PROGRAM FAULT			SCREEN NUMBER	ERROR NUMBER
PROGRAM DESCRIPTION				
HARDWARE FAULT				
<p>POLY:</p> <p>Screen does not light up</p> <p>Keyboard does not appear to start</p> <p>Some colours not right</p> <p>Screen unstable</p> <p>Won't run any programs</p> <p>Some programs won't start or fail part way through</p> <p>POLY will execute only standalone BASIC</p> <p>POLY's downstream of a particular POLY will execute only standalone BASIC</p>				
<p>DISK:</p> <p>Clicking noise, does not start</p> <p>Clicking noise, goes on until unit switched off</p> <p>Frequent disk errors reported</p>				
<p>PRINTER:</p> <p>Describe fault</p>				
NETWORK FAULT				
<p>System seizes when running a specific program</p> <p>One or more units are seized</p>				
GENERAL:				
Can fault be repeated at will?		Yes	<input type="checkbox"/>	
		No	<input type="checkbox"/>	
If Yes, how?				
OTHER COMMENTS:				
(attach separate sheet if necessary)				

6. SUGGESTED ROUTINE PROCEDURES

Various routine procedures should be followed to ensure the smooth running and use of the system.

- 1) Pupil access to the system should be carefully controlled. Issue of keys to the room should always be controlled by a teacher.
- 2) Smoking and the consumption of food (especially drinks) should be prohibited from the room housing the system.
- 3) Ensure that all cords are placed so that they cannot be tripped over.
- 4) Do not permit pupils to handle power plugs, power boards etc.
- 5) NEVER permit the pupils to operate the disk unit and specifically they should NEVER handle the subject disks.
- 6) Record all faults as described in section 5 and inform the system supervisor within the school, so that the copy may be sent to the Service Agent and/or Polycorp as quickly as possible.
- 7) For classroom use, schools should make copies of their master disks. The master disks should then be kept in a secure place.
- 8) Before powering off the POLYDRIVE, resetting the POLYDRIVE or changing disks, check with other users that it is safe to do so.

APPENDIX I

G L O S S A R Y

CPU	Central Processing Unit. The central electronic part of a computer containing the internal storage control unit and arithmetic unit.
CURSOR	A white block on the screen which indicates where any key which is pressed will be displayed.
DISK UNIT/ CONTROL UNIT	A unit which controls the POLY system and houses the floppy disk facility.
DOS	Disk Operating System.
Edit to	To transform data into some desired form, usually for output.
Floppy Disk	A circular flexible plastic disk on which data is stored magnetically.
Graphics	Non alphabetic data: Chunky graphics, teletext graphics and fine graphics, the latter utilise 240 or 480 dots across the screen.
Hardware	Physical computer equipment as opposed to software or user programs. Includes peripheral devices.
Input	Information transferred from keyboard or disk into the internal storage of a data processing system.
Interface	In the POLY system, the plug or cord joining 2 units.
LOGON	Procedure followed by the user in initiating session with POLY 1.
LOGOFF	To terminate a session on POLY 1.
Menu	List of programs (topics) contained in a subject module.
Micro-Computer	A very small computer based on micro-processors.
Network	Communications and cables which link POLYs to disk unit.

Operating System

The computer software providing an interface between the users program and the disk unit for the purpose of normal operation.

Output

Data sent out of computer to an external storage area, ie to disk, printer or screen.

Printer

A peripheral device which produces at least one line of print during each cycle of its action.

Program

The complete sequence of instructions and routines necessary for a computer to carry out a given task.

Software

The general term for computer programs including compilers and operating systems.

Storage

A device in which data can be recorded, retained and later recovered as required.

Teletext

Type of character generator used in POLY 1 which allows not only printing of text but also colour, flashing, double height, inverse video and a coarse form of graphics (chunky graphics).

Text

Alphanumeric data.

User

Person operating the computer system.