

**A Real Eye-Opener For Educators...**

**Who Said  
Maths,  
Physics,  
Science and  
Games Are  
The Limit?**

# THE LEARNING SUPPORT SYSTEM THAT'S A BOLD NEW BREAKTHROUGH -

- \*RIGHT ACROSS THE  
CURRICULUM
- \*RIGHT ACROSS THE  
CLASSROOM
- \*RIGHT ACROSS THE  
COLLEGE

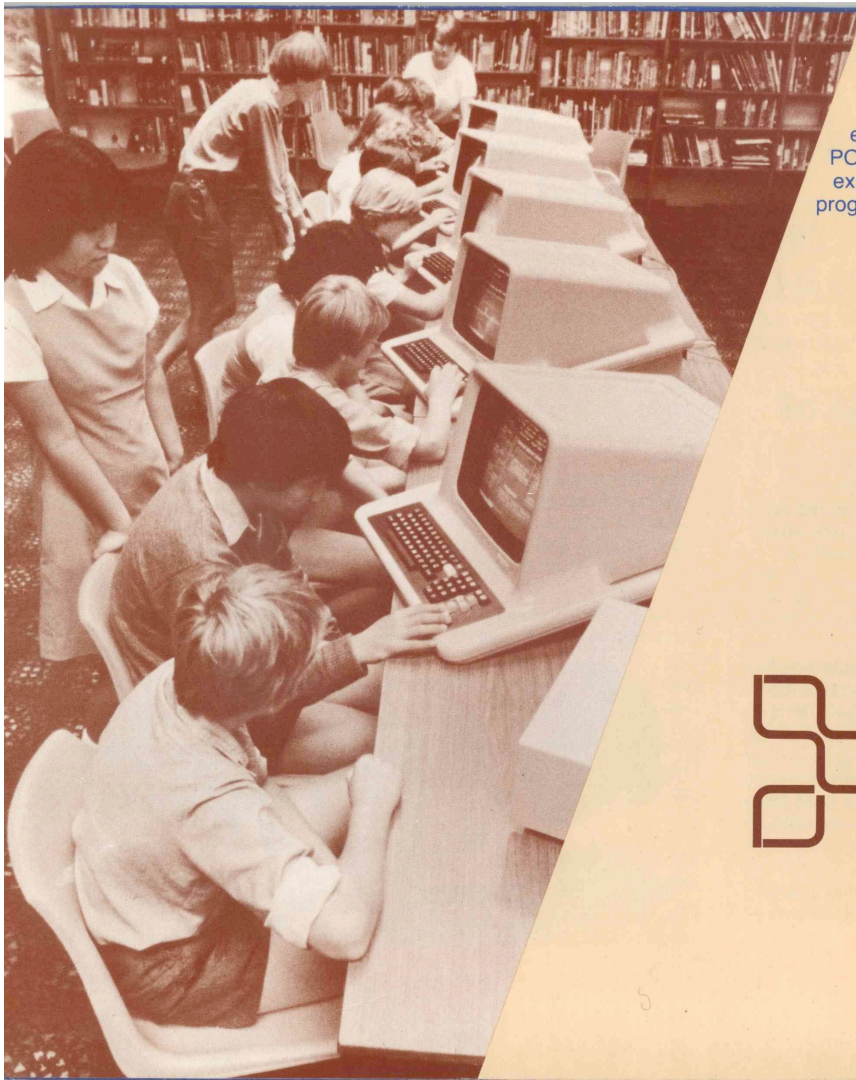




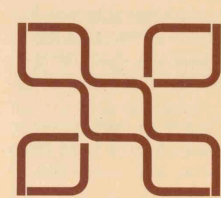


**Teacher And Student Oriented  
Desk Top Learning Support Systems –  
Simple To Use, Self-Contained, Rugged,  
Real Colour Units That Are Just Great For Graphics.**





With POLY, teachers are able to easily adapt standard educational courseware to their individual tutorial needs. POLY also gives educators without software programming experience the ability to develop their own courseware and program input.

 **poly**  
FROM **PROGENI**

**As a teacher or school administrator, you could well have wondered how long personal computers — one of the most exciting new resources in the teaching armoury — are destined to provide their benefits over a limited range of studies.**

In Maths, Physics and Science, everyday personal microcomputers have attempted a limited advance into the fertile field of education. Until now, such computers — basic business and home machines — have been merely (and seldom satisfactorily) adapted to suit the purpose. Their lack of flexibility, complex operation, restricted graphics capability and involved, often messy configurations are a distinct drawback to wider classroom use.

Another disincentive, however, stands out above all the others — the need for a great deal of computer “know how” before their users can achieve adequate coverage of even restricted curricula. Accordingly, they’ve largely remained a “backroom” curiosity in school after school.

To prevent this situation remaining an impediment to instruction in other areas of the modern syllabus, teachers drawn from a wide cross section of scholastic involvement challenged the accepted role of computers in education, producing an advanced, purpose designed learning support system as the vital alternative.

POLY from PROGENI. The comprehensive, wholly-creative learning support system that fully extends the widest educational interests of today's (and tomorrow's) students and their teachers.





## **Designed by teachers for teachers to help increase attainment levels over a broad subject range.**

POLY, the most advanced computer-aided learning support in the world, is fully proven in secondary schools as a totally forgiving, user-proof system.

It starts with attractive classroom units that are simple, complete in themselves and extremely durable. Consoles that can be carried from room to room, real colour that's intense and pure, sharp graphics that bring screen after screen of lesson support material to life.

With disk drive and printer support, POLY delivers teacher-defined material, paced — step-by-step — to suit individual student learning capacity. Operation is so straightforward that even a user manual isn't a prerequisite. POLY operates simply, effectively and without demanding previous computer programming skills from its users, right across the school spectrum.

In POLY the networking system which provides the communication interlink between consoles in a classroom set is so friendly and forgiving users aren't even aware it exists.

Schools with POLY also never need fear being left on their own, out in the cold. Apart from the on-going provision of superb set courseware, tuition and support is available in the development of individually tailored programs. The continuing high-level performance of the system is assured by on-going maintenance support from Australasia's leading software and systems company and its local representatives.

## **POLY is the leading edge of learning support**

Experience confirms that a purpose-designed microcomputer can make a most significant contribution to the learning process. Excellent results are achieved when the equipment employs fully-relevant curriculum support material, and is made available to **all** teachers and students in portable, compact, self-contained desk-top form.

The POLY classroom learning support system is proven to answer three major educational needs —

1. POLY helps students in schools, technical institutes and worker training schemes adapt to an increasingly computer-oriented workplace.
2. POLY brings an advanced teacher-support tool, providing additional motivational force for the learning process across a broad range of subject material.
3. POLY serves school administration needs, too, simplifying record taking, class timetabling and activity planning duties, also aiding front office and class routine as a text-processor.

While all computer devices have an inherent ability to enhance the learning process, it is critical for that potential to be combined with teaching content of quality, scope and local suitability. This ability, together with easy-to-use classroom networking and multi-screen graphic capabilities, is essential to total relevance in everyday classroom situations.

POLY is outstanding in this respect. It's also practical, portable and really cost effective. Equally significant (in the light of ever more rapid technological development) is the assurance that premature obsolescence is no threat to this advanced system — every POLY is designed to accommodate the technical improvements and innovations likely to occur over this decade, and for some time beyond.

## POLY is an integrated system.

With POLY, schools receive a practical, education-aligned and integrated package; a system, plus welcome user support, comprising —

- ★ INDIVIDUAL, DESK-TOP MICROPROCESSOR LEARNING UNITS, DISK DRIVE AND PRINTER.
- ★ A TEACHER AND STUDENT ORIENTED OPERATING SYSTEM. (So good a system — in fact — that you won't even know you're using it).
- ★ COMPREHENSIVE USER-TRAINING AND ON-GOING USER GROUP SUPPORT.
- ★ A CONSTANTLY-EXPANDING RANGE OF APPLICATION PACKAGES AND LEARNING MODULES (covering many sections of the school curriculum and supported by lesson plans and teacher/student note material).
- ★ HIGH LEVEL SOFTWARE/COURSEWARE SUPPORT (to encourage teachers to create their own programs).
- ★ FULL EXTENSION EQUIPMENT INTERFACE CAPABILITY.
- ★ "EASY ACQUISITION" ADVANTAGES.
- ★ COMPREHENSIVE IN-SERVICE BACK-UP.

## POLY has individual, desk-top learning units, disk drive and

The POLY classroom console is an ergonomically attractive, highly interactive unit which is appropriate to the learning process while being extremely robust — an essential feature in the often harsh environment of the classroom.

POLY units feature simple cabling-connectors, a functional minimum of switches and controls, and the use of carrying handles on each unit to make entirely practical their regular movement from place to place.

Each desk-top POLY incorporates the main processor, keyboard and video display in one functional unit — gone is the clutter of separate componentry, unnecessary cables, and plugs that work loose or malfunction.

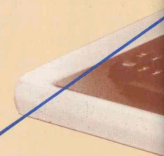
### POLY VIDEO DISPLAY

- full 35cm (14 inch) colour video screen capable of reproducing image material in up to 7 absolutely pure, realistic colours plus black (giving an additional 21 hues with screen-over-screen texturing).
- range of screen formats with:
  - 2 screen overlays, each with 40 column by 24 line text — 7 colour
  - single 80 column by 20 line text — 7 colour
  - single 480 x 204 pixel graphics — 7 colour
  - 2 screen overlays, each with 240 x 204 pixel graphics — up to 21 colours

THESE SCREENS MAY BE DISPLAYED SINGLY OR IN COMBINATION, USING MIXING OR OVERLAYING, TO PROVIDE REAL GRAPHIC IMPACT AND HEIGHTEN INFORMATION RETENTION. POLY HAS SUPERB, SIMPLE TO USE SCREEN-PLUS-BACKGROUND SUPERIMPOSITION CAPABILITIES FOR TOTAL EFFECTIVENESS IN ANIMATED SUPPORT GRAPHICS.

### POLY KEYBOARD

- full qwerty ASCII keyboard, upper and lower case types
- 16 function keys
- four in-built cursor control keys (not multiple key, escape or "paddle" controls so common on low-cost keyboards)
- numeric keypad
- editing keys
- calculator/"help" key
- NEXT, BACK and REPEAT keys for learning support system modules





## op microprocessor l printer.

### POLY CABINET

Constructed entirely of shock-resistant moulded fibreglass and cooled by natural convection. Ventilation spaces are concealed to minimise entry of dust, moisture and other classroom material. (Even paper clips and pencils!).

### POLY PRINTER

The POLY System is designed to use any commercially available printer providing a standard RS232 serial interface. In the school environment, Epson MX-80 and MX-100 models and the C-Itoh model 8510 are of an acceptable standard.

### POLY POWER SUPPLY

Input 240 + 8% volts 240 - 16% volts AC 50Hz (Australasian standard supply)

### POLY OPERATIONAL TEMPERATURE RANGE:

POLY is designed to operate in ambient temperature conditions of between 0°C and 40°C.

### POLY PROCESSOR

- latest micro-computer technology; uses a 6809 - based 8 bit processor with 16 bit arithmetic;
- 64K bytes dynamic memory (extendible to 128K bytes)
- 2K bytes static memory
- 4K bytes system prom
- 16K bytes BASIC prom
- built-in speaker for sound
- RS232 interface
- programmable timer and memory management unit
- network interface

### STANDARD POLY DISK DRIVE CONTROL UNIT

In conventional classroom deployment, the POLY system utilises a Disk Control Unit for:

- 1) storage of programs and operating system software essential to the classroom console units.
- 2) connection of a suitable printer, terminal, modem or other computer system peripheral to a POLY classroom set.
- 3) network control on a system of up to sixteen POLY units.

### POLY DISK EXTENSION

To ensure more extensive data and program storage, disk extension units can be employed to expand the disk storage capacity from 600K bytes to 2.4M bytes.

### The POLY Disk Control Unit features

- 8" flexible disk drive, formatted to store 600K bytes per disk (5", and hard disk units, optional)
- extension facilities for additional disk capacity (up to three extensions, each of 600K bytes)
- a separate, internal Motorola 6809 processor to control operating and communications services.
- up to 56K bytes of RAM storage for rapid data access
- 4K ROM

## **POLY has a teacher and student-oriented operating system.**

In a typical classroom situation, a POLY learning support system comprises up to 16 separate desk top console units, linked to a disk drive unit and hard copy printer. This arrangement gives each console unit the freedom to directly access disk and printer service. Each POLY unit — "plug-in" easy to install and use — is wholly reliable in service.

The comprehensive, top-quality courseware (and printed course material) can be adapted to conform to various tutorial approaches and the specialised needs of different categories of student.

Forget the computer software expertise demanded by computers; POLY encourages teachers to develop courseware and tailor existing programs to their needs, without previous programming experience. (Those with software experience, however, can utilise powerful programming aids with POLY — see "High Level Software/Courseware Support").

As programs are disk-based, the POLY system is best able to suit the individual capability of students, who can call up and store a wide range of graphics and use the function keys as required.

The whole exercise is a simple, flexible step-by-step operation. Under overall disk control, a screen "menu" of available lesson modules begins each session. By simply moving the flashing cursor to the relevant position, the required lesson module is selected.

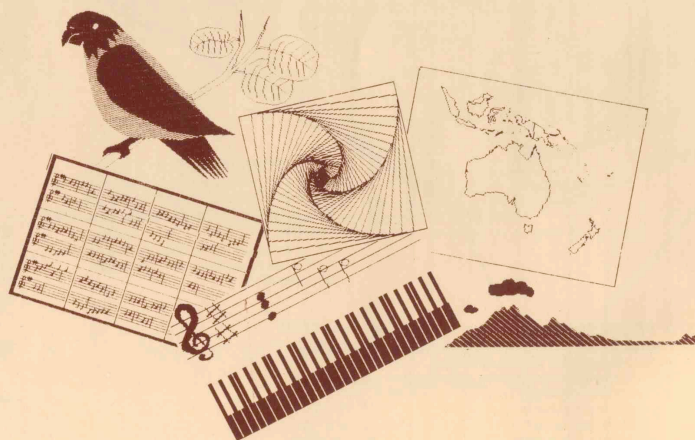
On POLY a high-resolution 35cm colour video screen is standard. Able to provide great colour definition, the screen vividly reproduces up to seven key colours plus black (or as many as 28 mixed colours on two or more screen "layers"), and has a reverse video capability. Graphic quality is crystal clear and superb animation facilities offer realistic subject movement potential.

With POLY, there's also the extension facility and flexibility of communication with most mainframe machines already used in a school district.

## **POLY offers comprehensive user training and user group support.**

PROGENI ensures that every teacher using the POLY learning support system is well assisted in the initial familiarisation stages, and beyond. In a refreshing break from the "drop it and run" approach all too common with some commercial and personal micro-computer suppliers, PROGENI training specialists provide comprehensive training support to all users of POLY.

Self-training and familiarisation kits are used in an initial 2-day teacher training session, together with manuals covering essential working aspects of POLY hardware, courseware, and its use in basic text, graphics and text-handling modes. A second phase of training material from PROGENI gives in-depth tuition on the essential steps necessary when teachers wish to produce their own high-quality courseware.





## **POLY has a constantly expanding range of education courseware and application packages.**

As in all other aspects, the POLY system sets new standards of quality in respect of the learning support modules it brings.

There is an existing library of this vital material, which is simple to use, creative in expression and offers colour graphics (diagrams and animation) to provide teachers with stimulating, visually compelling instructional back-up for their work with students.

Education courseware modules created for the POLY system are complemented by comprehensive printed manuals for student background and supplementary reading. POLY also furnishes excellent teacher and student guides, plus appropriate worksheets and lesson plans.

Prepared by specialists who are themselves teachers, POLY courseware embodies the highest professional standards in terms of both educational content and software.

Basic courseware is supplied on flexible disks in compiled form, using drill exercises, model simulation, learning support instruction and student evaluation techniques. Advanced computer awareness, keyboard skills, "projectile motion" and recreational games form the introductory stages of this constantly expanding range. Specialised curriculum material is also available in set subject areas.

The simple, precise operating format of the POLY system allows teachers to apply its powerful support to their particular areas of specialisation, regardless of subject.

## **POLY has high level software/ courseware support.**

The everyday operation of the POLY learning support system uses a flexible, simple software language called POLYBASIC. The courseware modules within the system library also use this powerful language. POLYBASIC, - together with ALLY, a further purpose-designed writing tool - facilitates the creation of high quality programs relevant to the requirements of individual schools and teachers; PROGENI provides full training, and program development support, to encourage such endeavours on the part of teachers without previous programming experience. (PROGENI will arrange the marketing services needed to distribute high-quality user-generated courseware amongst other POLY users on request.)

POLY systems also handle four programming languages — the structured language PASCAL; a high level BASIC; the specialised learning support language PILOT; and ASSEMBLER. (ALLY, already mentioned, is a fourth generation language specially developed for teachers).



## **POLY has full extension equipment interface capability.**

Every POLY classroom computer system is able to utilise additional peripheral equipment when such devices are called for in the learning process.

The systems can link with other computers. Even greater effectiveness in learning support can flow from the addition to a basic POLY set of large screen monitors, video disks, light pens and a wide range of extension data-storage devices.

## **POLY has "easy acquisition" advantages, too.**

It's so easy and affordable to obtain the learning support advantages of POLY. The system is offered with a full range of "low outlay, pay as you go" user options which ensure that its benefits are immediately available to a school, irrespective of its fiscal situation. And PROGENI can help further reduce (or even virtually eliminate) outgoings, by offering education modules created on POLY throughout their extensive marketing network, thus gaining sale royalties for the originating school. On request, a programme to contribute to the low operation overheads of a system can be tailored to every situation.

## **POLY has comprehensive in-service back-up.**

A continual research and development programme supporting POLY ensures that every one of its classroom sets — present and future — will benefit from technological enhancements designed to keep the system at the forefront of learning support practice. This is

a unique aspect of POLY because it removes any short term danger of obsolescence.

Every POLY installation is backed by a fully-localised maintenance and parts service designed to correct any equipment failure promptly.

This operational assurance is just another example of the confidence of PROGENI in the product, a natural reflection of the comprehensive, detailed approach applied to POLY design, manufacture, testing and quality control.

The end result is a product that is exceptionally reliable and practical to maintain at a high level of performance.

## **POLY has PROGENI**

The expertise of Australasia's leading software and systems house has been deeply involved in POLY development, and is committed to the supply and in-use support of the POLY classroom learning system.

Founded in 1968 to meet the need for a specialised software organisation, the company quickly became recognised as a leading international force in the application of advanced computer techniques to education, commerce, industry and government operations.

PROGENI is a substantial software company, with permanent offices in Lower Hutt, Wellington, Auckland, Christchurch, Melbourne, Sydney, Los Angeles and Houston, and project site teams in locations throughout the United States and Australasia. The counsel it offers represents the combined knowledge and experience of university professors, graduates, teachers, EDP specialists and business people who provide expertise appropriate to each sector of a number of highly diverse computer activities.

POLY is an example of PROGENI's dedication to the markets it serves. Apart from its role in presenting the system, and thoroughly supporting users in every aspect of POLY operation, PROGENI mounts system research and software support to aid the introduction of new, teacher-originated POLY courseware.





FROM **PROGENI**

## Your POLY distributor...

This brochure offers only a general overview of the very comprehensive facilities and benefits of the POLY classroom learning system; your local distributor will be pleased to elaborate, and arrange for you to fully evaluate this advanced system in your classroom.

# PROGENI

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PROGENI has offices also in Lower Hutt, Wellington, Christchurch, Los Angeles and Houston

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