

CONTEMPORARY SCHOOL MATHEMATICS

General Editor: Dr. G. MATTHEWS

First Series (Stds. 7 and 8)

Matrices 1
Sets and Logic 1
Computers 1
Shape, Size and Place

Second Series (Stds. 9 and 10)

Matrices 2
Sets and Logic 2
Computers 2
Introduction to Probability and Statistics

It is common knowledge that a revolution is taking place in the teaching of mathematics. This series of eight booklets has been written at St. Dunstan's College in Britain, under the general editorship of Dr. G. Matthews.

They are intended to *supplement rather than to replace* existing texts, which can still be used extensively with discretion. Experience has shown that Co-ordinate Geometry can be introduced far earlier than was hitherto suspected, and the association of numbers and indeed of Algebra with Geometry is the main topic of *Shape, Size and Place*. This helps to show that Mathematics is a unified subject rather than a series of disjointed mysteries.

The ordinary rules of Algebra and Arithmetic are appreciated more when one encounters situations when they no longer hold; the first of these counter-examples is provided by *Matrices*, which are also strikingly polyvalent. *Sets and Logic* introduce a common language used in many branches of the subject, leading eventually to a much clearer concept of "function". It has been established that encountering different rules does not confuse pupils; on the contrary, they feel that they must be more careful to be sure they know what they are doing. Thus a better understanding is achieved with interest in concept as well as in technique.

Statistics can no longer be avoided, but pupils must be warned of their misuses, as well as learning something of the way in which inferences can be drawn correctly. Perhaps the greatest revolution of the century is the development of *Computers*. The booklets dealing with these give not only an idea of the types of problem solved and the methods used, but also a glimpse of the scope and power of computers.

Price 70 cents per booklet

EDWARD ARNOLD (PUBLISHERS) LTD.

41 MADDOX STREET, LONDON, W.1

MIDLANDS Mathematical Experiment

Director: CYRIL HOPE, B.Sc.

Principal Lecturer in Mathematics, City of Worcester Training College, England

an exciting new project which is arousing great interest
among all those concerned with the teaching of Mathematics
in South African secondary schools.

Inspection copies and a 16 page descriptive leaflet available from:

GEORGE G. HARRAP & CO. LTD.

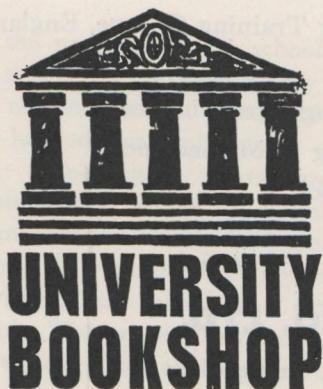
182 High Holborn, London, W.C.1, England

THE UNIVERSITY BOOKSHOP

*an invitation to visit, phone or
write us
... and why*

Students and the men and women
who train them find exactly what
they want at the University Bookshop
because ...

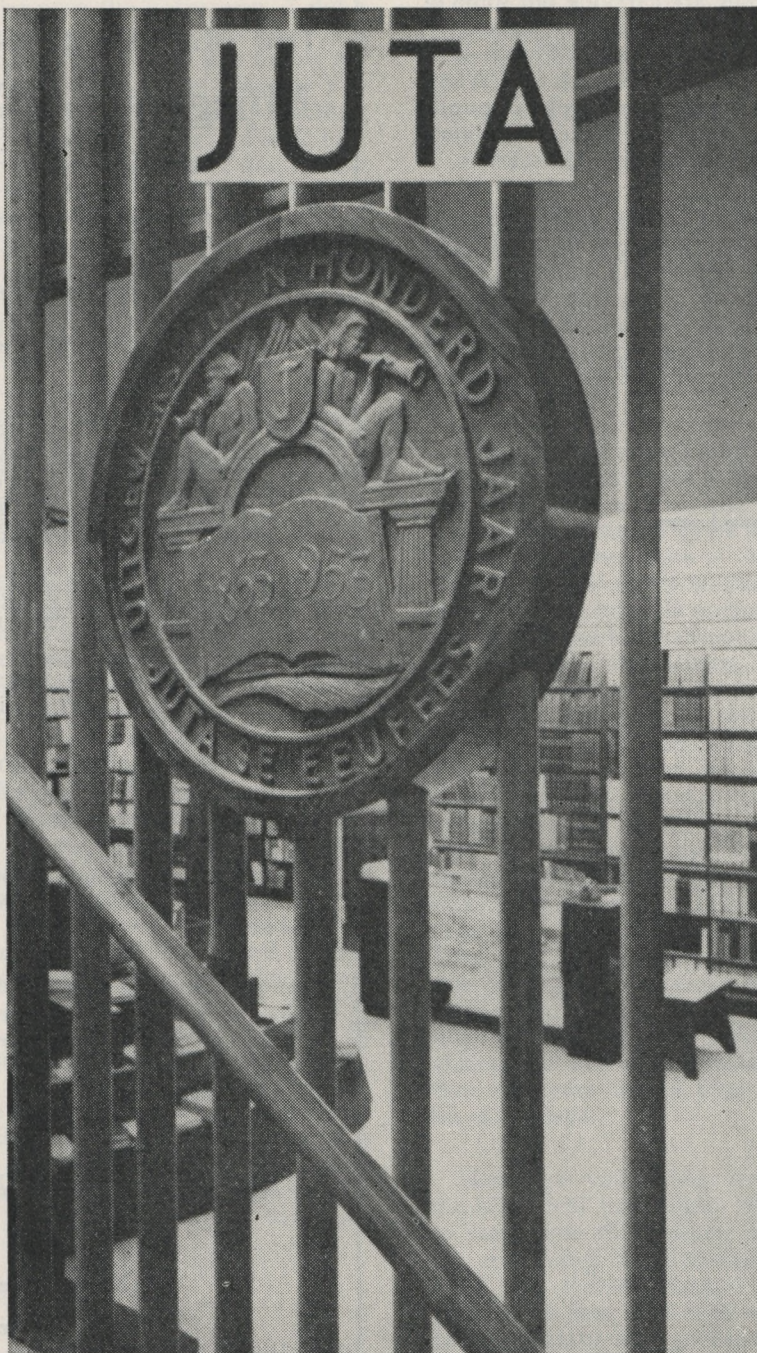
- * It specialises in educational,
scientific and technical books.
- * It is staffed by specialists in this
field.
- * It has brought the Mail Order
business to perfection, dealing
with each request immediately.



Central News Agency Ltd.

34 Bertha Street
Braamfontein
Johannesburg
Phone: 724-8541

**Booksellers
to
South
Africa's
Students
for well
over a
Century**



**Publishers
of
Educational
Books
since
1853**

You are invited to visit our spacious bookshop at

JUTA'S BUILDING
c/r Loveday and Pritchard Streets
Johannesburg

Tel. 834-4231

P.O. Box 1010

PROTEA LABORATORY SERVICES

DIVISION OF PROTEA HOLDINGS LIMITED

P.O. BOX 5598 JOHANNESBURG TRANSVAAL

suppliers of

- ★ Laboratory Furniture and Fittings
- ★ Chemicals and Scientific Apparatus
for Industry and Education

*We specialise in the designing,
furnishing and equipping of
science laboratories for physics,
biology, chemistry and
geography*

Branches at
Cape Town
Port Elizabeth
East London
Durban
Welkom
Salisbury



Copies cheaper **AND COPIES QUICKER**

There is no more effective, less expensive method of producing copies. Type, write or draw on a sheet of paper, put it on the Banda, and run off your copies.

There is no processing, and up to seven colours can be produced in the one operation, from the one 'master'.

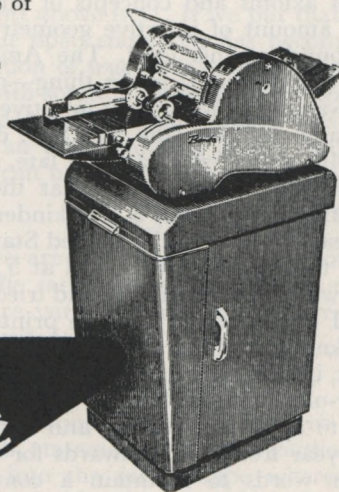
Between the extremes of typewriter and long-run duplicator, Banda meets the needs of every business where short-run copying must be fast and economical. There are hand and electric models for every type and size of business.

Let us show you how BANDA can give you the copies you want. Write or phone,

BLOCK & ANDERSON S.A.
(PTY.) LTD.

**BANDA HOUSE 58, SMAL ST.,
JOHANNESBURG**

Telephone 22-2185/6 P.O. Box 2178



Banda

THE MASTER COPYING METHOD

Teaching materials for the latter portion of the 20th century

As pioneers of modern instruction apparatus and material, we have available a selection second to none in South Africa. It includes Vu-Graphs, Vu-Lytes, Projectors, Porta Scribes, Porta Labs, Teaching Machines, Programmes, Sense Training Apparatus, over 6,000 Stripfilm titles and Transparencies — some 200,000 pictures — Cuisenaire, Flannelgraphs, Handicrafts, Wallcharts, Maps, Biological and Technical Constructional Models, Three Sense Method, Tape Recordings, Tape Recorders, Gramophone Records Record Players, apparatus and materials to speed understanding and make your lessons the lively and stimulating periods they should be.

Most of these materials are available on Rand for Rand and some on Free Allocation.

May we have the pleasure of sending you prices and details of any instructional materials in which you are interested?



EDUCATIONAL DISTRIBUTORS (PTY.) LTD.

Johannesburg

P.O. Box 4410

Cape Town

P.O. Box 3320

Pietermaritzburg

P.O. Box 617

Port Elizabeth

P.O. Box 1023



SONOR MELODIC PERCUSSION
(ORFF-INSTRUMENTS)

Goldklang RECORDERS

ADLER Recorders

DOLMETSCH Recorders

Specialist Suppliers of Educational Musical Instruments

PERCUSSION BAND INSTRUMENTS, MELODIC PERCUSSION, RECORDERS

MUSICAL TEXT-BOOKS FOR TEACHER AND PUPILS

ILLUSTRATED PRICE LISTS SENT ON REQUEST

J. J. VAN DE GEEST & SON

39 PLEIN STREET, JOHANNESBURG

TELEPHONE 22-1860

P.O. BOX 4046



ANGLOVAAL — A Great South African Enterprise

Anglo-Transvaal Consolidated Investment Company, Limited, which was formed in June, 1933, today has a capital of R5,901,860. It acts as a mining and industrial finance house and has under its aegis a group of mining, industrial and finance companies with an aggregate market value exceeding R200 million. A policy of enterprise has always been the driving force behind Anglovaal's investigation and development of new mining areas and of industrial ventures. The principal companies forming the Anglovaal group are given below:

GOLD AND URANIUM MINES

Eastern Transvaal Consolidated Mines Limited.
Hartebeestfontein Gold Mining Company, Limited.*
Lorraine Gold Mines, Limited.
Rand Leases (Vogelstruisfontein) Gold Mining Company Limited.
Village Main Reef Gold Mining Company (1934) Limited.
Virginia Orange Free State Gold Mining Company, Limited.*
Zandpan Gold Mining Company Limited.

**Denotes Uranium Producer*

BASE METAL AND COAL MINES

Anglo-Transvaal Collieries, Limited (and associated collieries).
Associated Manganese Mines of South Africa Limited.
Consolidated Murchison (Transvaal) Goldfields and Development Company, Limited.

INDUSTRIAL COMPANIES

Anglo-Alpha Cement, Ltd.	Kimberley Engineering Works Ltd.
Bitroid Ltd.	Maconochie Bros. Ltd.
James Brown and Hamer Ltd.	National Bolts and Rivets Ltd.
Colas South Africa Ltd.	Pigott Maskew and Co. (Pty.) Ltd.
Consolidated Glass Works Ltd.	South Atlantic Corp. Ltd.
Decorative Boards (Pty.) Ltd.	South African Quarry Industries Ltd.
Feralloys Ltd.	South African Torbanite Mining
Globe Engineering Works Ltd.	and Refining Company, Ltd.
Guest Keen Anglovaal Automotive Components Ltd.	Union Lime Company Ltd.
Irvine and Johnson Ltd.	Wright Anderson (S.A.) Ltd.

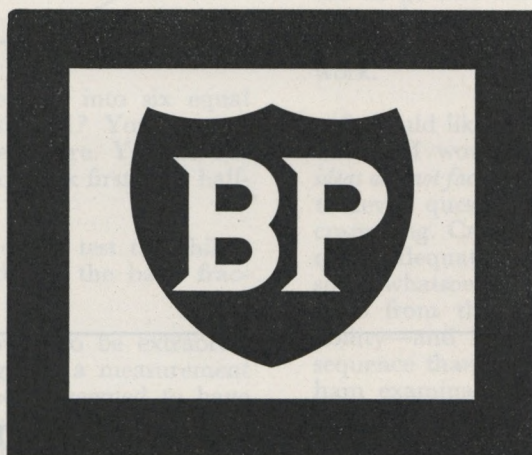
FINANCIAL

Anglo-Transvaal Industries Ltd.	
Middle Witwatersrand (Western Areas) Limited.	Nail and Chain Ltd.

ANGLO-TRANSVAAL CONSOLIDATED INVESTMENT COMPANY, LIMITED

Anglovaal House, Johannesburg, South Africa	Telephone 838-8011	P.O. Box 7727
London Office: Anglo-Transvaal Trustees Limited,	Bilbao House, 36 New Broad Street,	
	London, E.C.2	

Research Keeps



Ahead

Careers for Graduates

The Anglo American Corporation Group through its interests in mining, industry, research and other fields provides openings for satisfying and rewarding careers.

- In the Group's technical divisions there is broad scope for graduates in mining, chemical, mechanical, civil and electrical engineering and metallurgy.
- Graduates in science are able to participate in the many research projects conducted by the Group.
- Qualified geologists are needed for the continuous prospecting undertaken by the Group.

Interested persons should write to the Personnel Officer, 45 Main Street, Johannesburg.



**ANGLO AMERICAN CORPORATION
OF SOUTH AFRICA, LIMITED**

TRANSVAAL TEACHERS' ASSOCIATION

(FOUNDED 1904)

What the T.T.A. stands for:

- (1) Progressive Education — the Education Committee studies all the latest movements the in education.
- (2) Professional Responsibility — the T.T.A. works towards an enhanced status for profession.
- (3) Liberal outlook in education — our interests go beyond a purely narrow education. We oppose reactionary policies.
- (4) Improved conditions of service — this embraces salaries, leave privileges, pensions, Schools, etc.

The T.T.A. is NOT a sectional association. It caters for all branches of the profession; college of education lecturers; high school and primary school teachers, and married women teachers.

What the T.T.A. offers you:

- (1) The services of a full-time General Secretary.
- (2) Easy approach to the Education Department with your difficulties.
- (3) Legal defence in matters of professional interest — a strong Fund is available when needed.
- (4) A Benevolent Fund to help members in cases of distress, illness or sudden emergency.
- (5) A permanent headquarters at 134 Loveday Street.
- (6) The "Transvaal Educational News" — official organ of the Association and a forum of progressive educational thought.

ANNUAL SUBSCRIPTION	...	...	...	R7.20
---------------------	-----	-----	-----	-------

Membership open to certificated teachers in Private Schools

For full details apply to:

THE GENERAL SECRETARY - - - - Transvaal Teachers' Association

P.O. Box 1763, Johannesburg

Head Offices — Eloff Street, Johannesburg



The O.K. Bazaars is the largest retail organisation in South Africa, employing 13,000 people of all races. It has more than 90 branches in existence or in the planning stage in South Africa and a further 50 in Great Britain.

It offers a wide field of employment for school leavers and university graduates which includes lawyers, industrial and clinical psychologists, nurses, staff trainers, accountants, architects, draughtsmen, electrical engineers, caterers, display artists as well as

OPPORTUNITY OF A LIFETIME . . .

selling and clerical staff. Selected male matriculants and graduates are given a unique five months residential training course to prepare them for managerial appointments, decided entirely by merit based on performance, and restricted only by the limits of the capabilities of those seeking promotion.

Many staff services of practical and financial value are provided — Pension and Sick Funds for males and females — Canteens offering wholesome meals at low cost — special Sick Leave facilities — and the accumulation of Long Leave.

School leavers and graduates may be recommended with confidence to make further enquiries regarding the many opportunities in this large and expanding company.

Those interested in obtaining details should be referred to:

**The Personnel Manager,
2nd Floor,
O.K. Bazaars,
Kerk Street,
(P.O. Box 3171)
JOHANNESBURG**



... FOR A LIFETIME
OF OPPORTUNITY

HOW SHALL WE FACE TOMORROW'S GREATEST CHALLENGE

?

Ever since the Newsom Report* came out there has been little doubt as to what the challenge is. The report pointed its finger in no uncertain manner towards television — firmly drawing attention to the increasingly important role it must inevitably play in education. Yet the subject remains highly controversial, and many people are uncertain about its full implication.

What is already abundantly clear is that television can be the world's most powerful medium for communication — almost certainly the most effective to be devised since the day the blackboard was invented. And of the several ways in which television can be used in education, it is probable that closed-circuit TV is potentially the most valuable.

**'Half Our Future', the Newsom Report on Secondary Education published by the Central Advisory Committee for Education, October 1963.*

THE EXPERIENCE THAT CAN HELP

We at Pye H.D.T. have already gained a wealth of experience in this field. Just as the Pye group pioneered closed-circuit TV in Europe in 1952 so Pye H.D.T. have pioneered the use of this medium in every aspect of education. Not only were we the first people to introduce closed-circuit television into this country's schools, we are also

installing — in Glasgow — the world's largest educational TV system, while at Brantwood we equipped the first teacher training college and at Cambridge the first British University, to use closed-circuit TV. No other company in the country has the knowledge and experience which Pye H.D.T. have built up over the past seven years. Our concentrated study in all parts of the world and the pioneering of complete installations of educational television systems in this country, has placed us in a unique position to offer advice based on *practical* experience of *all* aspects of educational television. The knowledge we have gained from this experience will, we believe, be of great value to you when you are weighing up the pros and cons of educational television.

BRAIN POOL READY TO ADVISE YOU NOW ON CLOSED-CIRCUIT TV

Our experts will gladly give you all the helpful advice they can. Indeed they will welcome an opportunity to discuss the whole future of educational TV with you. For they are just as anxious as you to discover how the wisest possible use can be made of this immensely powerful medium.

What problems would you hope to solve by using closed-circuit TV? Tell us, and we will produce a complete plan, without any obligation, based entirely on the results of our discussion.



PYE TELECOMMUNICATIONS (Pty) Ltd

P.O. BOX 200 BRAMLEY, TVL. TELEPHONE JOHANNESBURG 406871

REPRESENTING

PYE H.D.T. LTD. CAMBRIDGE

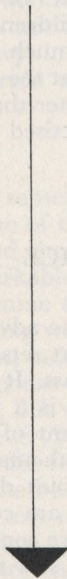


With the Compliments of

Cairns Construction Company

Building Construction and Engineering Contractors

P.O. BOX 77, ORANGE GROVE, TRANSVAAL



*Wishing SYMPOSIUM every
success with this, one of its
most important issues*

CYBERVOX LANGUAGE LABORATORY

The New Technique in Language Teaching

The selection of acoustic materials for the walls of the booth has taken into account the need for a surface on which it is difficult if not impossible to doodle.

A removable sheet of Triplex toughened glass is used for the front of the booth. The angle at which this is placed has been calculated to obviate as far as possible the possibility of the teacher facing a mass of reflections.

(Perspex was rejected as unsuitable because of its tendency to show scratches and turn "milky" under certain conditions).

Although each booth occupies only 5 sq. ft. of floor area each student has available a clear desk area of 24 in. x 18 in. for working purposes.

The student has a volume control for each track to enable him to adjust them both to a separate but comfortable listening level. The student can also adjust the degree of audio-activity in his headphones down to zero if necessary.

Tape stops automatically at either end. It is not possible for the student to wind his tape off the spool.

Teacher has complete control of any or all students' desks. He can, without leaving the console or enlisting their aid, rewind their tape decks to the beginning and record a new programme onto their tapes.

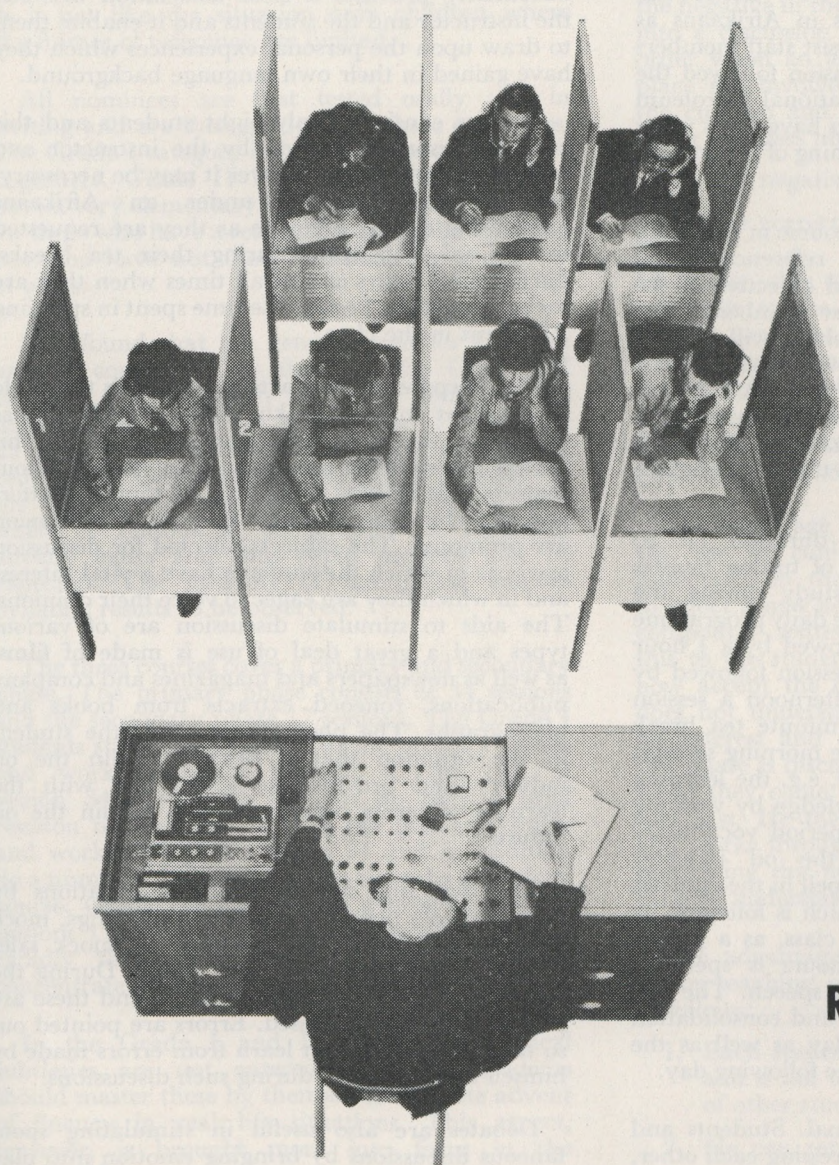
To facilitate easy operation, the switches on the console are always positioned so as to simulate the actual layout of the laboratory. This makes it possible for teachers to use the numbers merely to reinforce the far more natural method of identification by position.

Completely transistorised plug-in modules make it possible for non-technical teachers to effect many of their own repairs without assistance or delay.

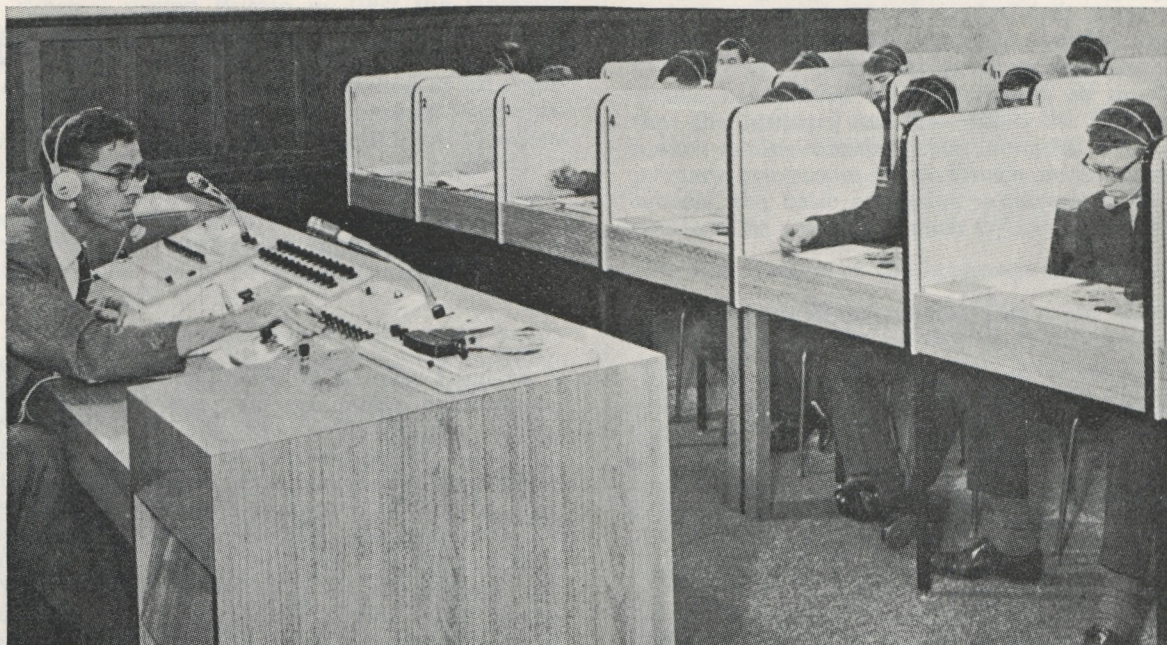
For full particulars apply to the
Sole Agents for South Africa:

R. H. HARRISSON & CO.
(PTY.) LTD.

703/4 PAN-AFRICA HOUSE
77 TROYE STREET
P.O. Box 1566 Tel. 22-9047
JOHANNESBURG



CEDAMEL LANGUAGE LABORATORY



Simple

—

Robust

—

Functional

THE TEACHER

★can speak to a student and converse with him ★can transmit instructions or a programme from recorded tape, records or radio, to any student or students ★can record the master tracks of the student's instruments from the control console ★can start or stop any students' instruments ★can produce multiple copies of any lesson tape by using the language laboratory equipment

THE STUDENT

can listen to programmes (teacher's voice, recorded tape, records or radio) from the control console ★can record his own voice on the second track, even while a programme is being recorded on the master track ★although in a group, is not disturbed by, nor does he disturb, his classmates

SINGLE CONTROL LEVER

★the same control lever starts and stops the tape, and also operates the high-speed advance and reverse

COMBINED MICROPHONE AND HEADPHONES

★light — gives complete isolation ★the microphone is directional and will not pick up outside sounds — thus room noises are practically eliminated from the circuit ★the microphone remains at the same distance from the mouth and all recordings are at a constant sound level ★the built-in "feed-back" enables the student to hear his own voice through the headphones

All recorders and equipment used are purpose made and not adapted to domestic tape recorders

CEDAMEL ENGLISH MASTER TAPES AND FILM STRIPS AVAILABLE COVERING: INITIATION, INTERMEDIATE, AND ADVANCED COURSES

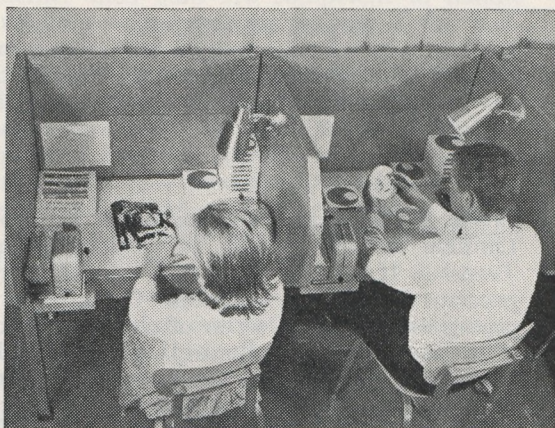
TRAMINCOR (PTY.) LTD.

107 SMIT STREET
TELEPHONE 724-5351

BRAAMFONTEIN

P.O. BOX 9222
JOHANNESBURG

Swifter and more complete learning



EDL Learning Station

- Improved visual efficiency and comfort
- Heightened aural discrimination and retention
- Greater accuracy in word recognition
- More rapid association of word with meaning
- Enriched and expanded vocabulary
- Greater thoroughness in reading and listening
- Improved understanding of the organisation of written and spoken material
- Increased skill in analysing content
- Ability to skim for an over-all impression
- Ability to scan for specific facts and information

Instruction and practice in these vital aspects of communications improvement are provided in the Communications 400 Lab which has been developed by the Educational Development Laboratories of New York.

Since its inception in 1954 EDL's goal has been to find new and more effective ways to make possible swifter and more complete learning. EDL's major effort has been in the development of improved methods and material for reading instructions. EDL's continuing research in the reading field has lead to the development of many new methods and materials of instruction in such areas as listening, vocabulary improvement, study skill development and skimming and scanning techniques. Multi-media approaches have also been developed for instruction in typing, shorthand, ten-key adding machine operation, bookkeeping, and other business skill areas.

The **AUDIO-VISUAL DIVISION** of African Consolidated Films (Pty.) Ltd., are the exclusive distributors of all EDL materials; also for RANK LANGUAGE LABORATORIES, ELECTRONIC FUTURES INCORPORATED 'WIRELESS' LANGUAGE LABORATORIES AND AUDIO TRAINING SYSTEMS, BELL & HOWELL LANGUAGE MASTER MACHINES, 16mm B & H projectors, Strip/Slide projectors, Micro projectors, Overhead projectors, Educational Films, Strip Films, Overhead Transparencies, Episcopes and Screens, Percepta-Matic Tachistoscopes.

For further information write to: The Manager, Audio-Visual Division,

AFRICAN CONSOLIDATED FILMS (PTY.) LTD.

P.O. Box 4552, JOHANNESBURG

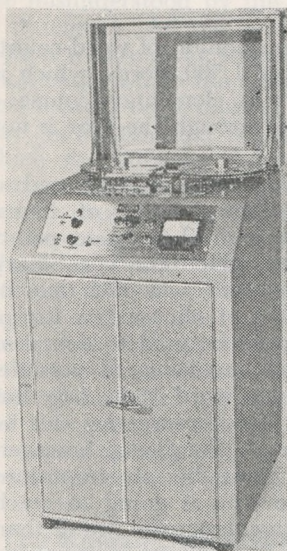
P.O. BOX 11458

SINCLAIR

PHONE 23-8739
JOHANNESBURG

ELECTRONICS (PTY.) LTD.

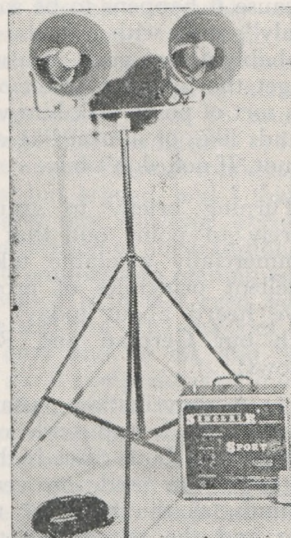
MANUFACTURERS IN THE REPUBLIC OF PROFESSIONAL AND INDUSTRIAL
TAPE RECORDERS, LANGUAGE LABORATORIES AND STUDIO EQUIPMENT



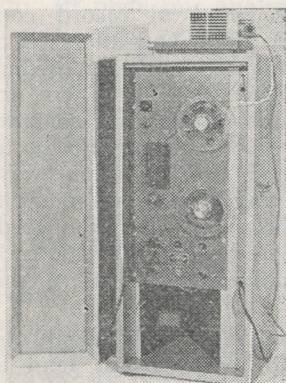
A FULL TRACK PROFESSIONAL
TAPE RECORDER



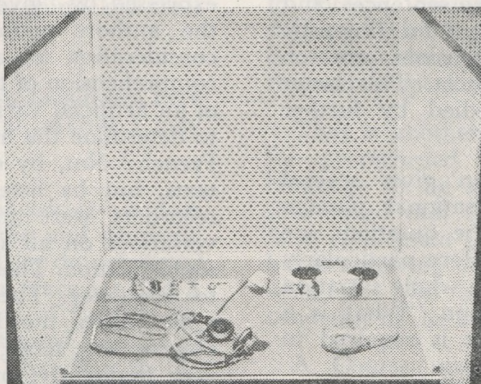
A 10 CHANNEL RECORDING STUDIO MIXER OR CONTROL
DESK WITH FACILITIES FOR 3 TRACK STEREO RECORDINGS



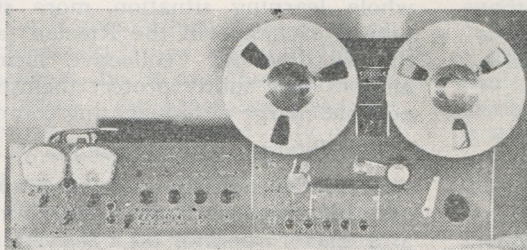
PORTABLE TRANSISTORISED
AMPLIFIER FOR SCHOOL
SPORTS MEETINGS, ETC.



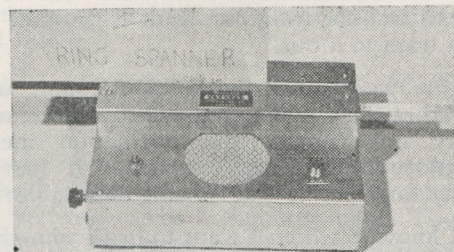
LEFT: AUDIO-VISUAL TAPE
PLAY-BACK MACHINE



ABOVE: A BOOTH OF OUR LANGUAGE LABORATORY



LEFT: A PROFESSIONAL TWO-TRACK
STEREO TAPE RECORDER



BELOW: A CARD TYPE
TEACHING MACHINE

GRUNDIG LANGUAGE MASTER

is the most versatile and advanced method of language tuition yet devised. Produced, after many years of research, by the world's largest tape recorder manufacturers, it is now available and offers these outstanding facilities:

1. Up to 20 copies of the pre-recorded master tape are produced simultaneously.
2. A student can erase his own recordings repeatedly to make more correct ones thus providing him with unique opportunities to improve intonation and pronunciation.
3. The installation can be used for specialised training, simultaneous translations, and many other educational purposes.
4. The equipment has exceptional quality reproduction. It can be used for school broadcasts, relaying music via the built-in speakers or over any public address system.

Sole South African Distributors:

WIRE RECORDERS S.A. (PTY.) LTD.

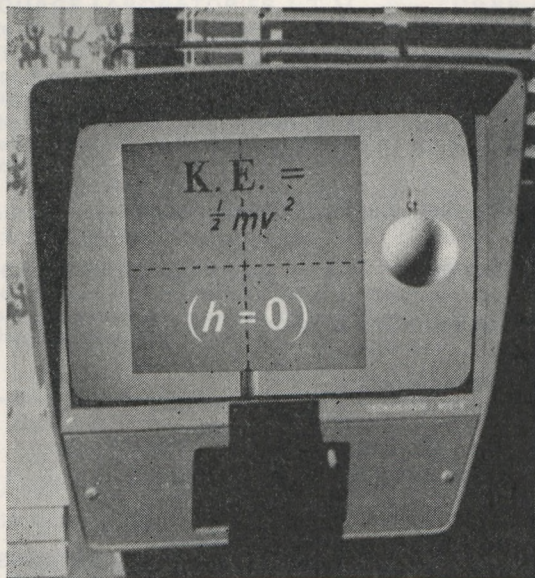
41 VON BRANDIS STREET, JOHANNESBURG

P.O. Box 9500

Telephone 23-5187

Depots: Durban, Cape Town, East London, Port Elizabeth and Bloemfontein

A new approach to teaching



120 8mm film loops to fit this or any other 8mm projector, available from **MACMILLAN & CO. LTD.**, on Science, Crafts, Languages and Medical Subjects.

For full details write:

J. O. CHESTERS, P.O. Box 5841, JHB.

Technicolor 800 E.2 rear projector.
Requires no 'black-out'



Designed to speed the learning process

'Scotch' Brand Recording Tape No. 175 is designed especially for schools . . . as an aid to faster learning, and to make your teaching job easier and more enjoyable.

"Tenzar" backing, exclusive to 'Scotch' Brand Recording Tape No. 175, has all these advantages:

- 16 times greater tear resistance than standard acetate backing.
- Won't break when edges are nicked.
- Withstands continuous play, fast starts and stops.
- Stores well — won't dry out or become brittle.

'Scotch' Brand Recording Tape No. 175 has the famous 'Scotch' Brand high potency oxide coating that ensures brilliant, dependable sound reproduction.

Scotch
BRAND RECORDING TAPE No. 175

3M MINNESOTA MINING & MANUFACTURING
COMPANY (SOUTH AFRICA) (PTY) LIMITED

A?—or B? The answer is in PROGRAMMED LEARNING

After completing this program, the student (AND teacher, training officer and personnel director) will be able to name the Company offering the most extensive range of equipment and services in the Programmed Learning field in South Africa.

Do you think that the only companies worth anything in the PL field are in America, Britain or Europe? IF YES, GO TO B

Do you think that I. T. M. (S.A.) Pty. Ltd is the company that can answer the above challenge? IF YES, GO TO A

Your Answer: International Tutor Machines, South Africa, (Pty.) Ltd. offers the most extensive range of equipment and services in the Programmed Learning field in South Africa.

A

THIS IS CORRECT. WELL DONE. *Take a look at the range:*

THE GRUNDYTUTOR automatic teaching machine based on the Crowder branching principal. The GRUNDYTUTOR can also be programmed to use Skinnerian linear techniques within a branching program.

THE GRUNDYMASTER linear teaching machine.

PROGRAMS, covering subjects over the complete range of school, technical and adult education have been published and are available for both the GRUNDYTUTOR and the GRUNDYMASTER. I.T.M.'s program catalogue is one of the most extensive in the world today and new programs are being added to it every month.

LANGUAGE LABORATORIES I.T.M. offer THREE first rate language laboratory setups to suit a variety of individual needs and budgets.

*I.T.M. LANGUAGE LABORATORY based on one magnetic drum, no tape at student positions, simplifying student operation and reducing running costs to a small fraction of conventional laboratories.

*The PRINCE Language Laboratory is one of the most reliable tape teachers in the world today. More than 70 satisfied users in Britain will testify to this.

*The TRANSTUTOR Unit System Language Laboratory enables organisations operating on a small budget to progress from one tape recorder to a full-scale language laboratory in easy stages.

PROGRAMMING SERVICES I.T.M.'s Program Department, staffed by more than 30 highly trained programmers, is geared to prepare programs on contract for individual educational and training requirements.

*For further information
please address your enquiries to:*

**INTERNATIONAL TUTOR MACHINES (S.A.) (PTY.) LTD.,
P.O. BOX 7018, JOHANNESBURG.**



B

Your Answer:

The only companies worth anything in the PL field are overseas.

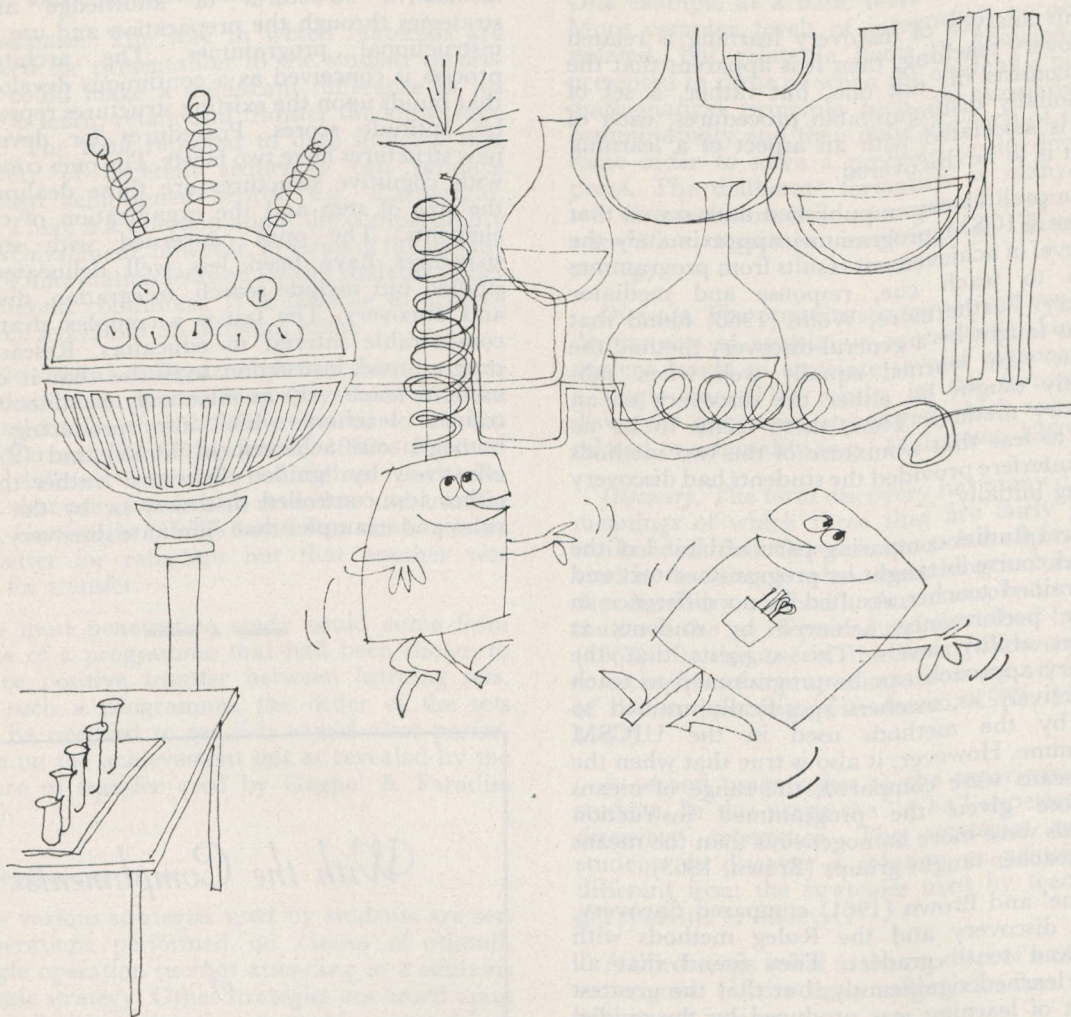
NO: *No, you're missing some important information about a recently founded South African company.*

RETURN
and try again.



I.T.M. GRUNDYTUTOR

H3a 1132



AVANT GARDE CHEMISTRY

(Chemistry with a twist to it)

What is **now** going on in AE&CI laboratories won't seem even slightly **avant garde** in the future. Like all true scientists we aim to keep ahead of the times. For example AE&CI were first to make Methanol in South Africa, which proved invaluable in the manufacture of Formalin, which in turn proved invaluable in the manufacture of formaldehyde resins, which of course are as taken-for-granted as anything can be. Chemistry-wise if there's a new angle, a new approach (or a new twist to an old idea) you can be sure AE&CI will have it first . . . fast!



AFRICAN EXPLOSIVES AND CHEMICAL INDUSTRIES LTD.

Cal. 6938 33/4A

Teachers of English

Paperback reprints of some of the modern classics on English and language teaching are now available in the *Language and Language Learning* series, published by the Oxford University Press. They are timely and pertinent to the English situation in this country.

Six titles are now available:

Sweet: "THE PRACTICAL STUDY OF LANGUAGES. R1.33.

Firth: "THE TONGUES OF MEN AND SPEECH". R1.15.

Quirk & Smith: "THE TEACHING OF ENGLISH". 90c.

Osman: "MODERN ENGLISH". R1.27.

Palmer: "THE PRINCIPLES OF LANGUAGE STUDY". R1.00.

Enkvist, Spencer & Gregory: "LINGUISTICS AND STYLE." 75c.

Further titles to be published soon include:

Palmer: "CURSO INTERNACIONAL DE INGLES". R1.33.

Catford: "A LINGUISTIC THEORY OF TRANSLATION". 90c.

Stevens: "PAPERS IN LANGUAGE AND LANGUAGE TEACHING". 90c.

— Obtainable from your usual bookseller —

OXFORD UNIVERSITY PRESS

Cape Town

Johannesburg

Salisbury

Trophies in Gold, Silver or Lifetime Plate

Figurines and other models, cups, bowls, shields, salvers, medallions, and ceremonial regalia

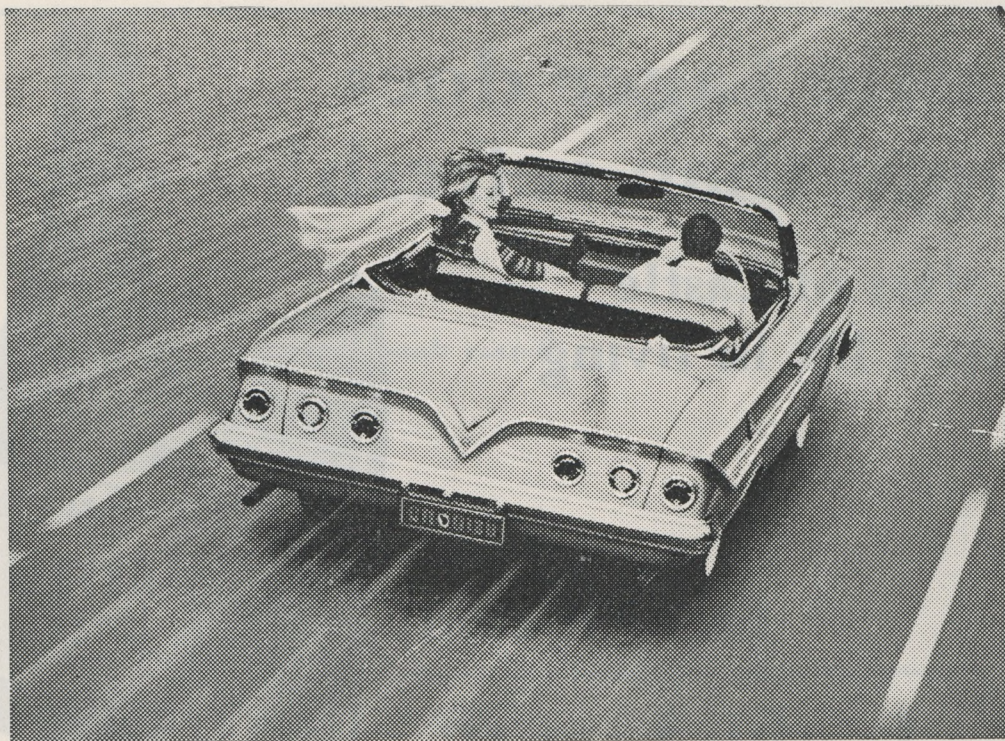
With its international resources and a traditional craftsmanship extending over more than a century and a half, the House of Mappin & Webb is uniquely equipped to provide individually designed trophies and awards of lasting value and artistic merit

Designs and estimates are submitted without charge and experienced advice is freely available

Mappin & Webb
(SOUTH AFRICA) LTD

Franwell House, 105 President Street, Johannesburg
Telephone: 22-0316 P.O. Box 3055

LONDON • BIRMINGHAM • SHEFFIELD • PARIS



*Today's
best-selling
premium
petrol*

SUPER  AROMAX

Castle Lager does more than refresh!

A glass of Castle
puts a lift in living

Enjoy it cold!



Grant 8058-2

With the Compliments of

**MERC GARAGE &
SERVICE STATION**
(PTY.) LTD.

Continental Car and Mercedes Benz Specialists

139 Nugget Street
Johannesburg
P.O. Box 1361



For your printing requirements consult . . .

Colour printing specialists

Durand & Bowden

(Pty.) Ltd.

10 Harries Street Johannesburg

PRINTERS — STATIONERS — OFFICE EQUIPMENT SPECIALISTS



MUSIC

is our business

We have been manufacturing musical instruments for more than 150 years and our high standard of craftsmanship is endorsed by educational authorities the world over

BOOSEY & HAWKES (S.A.) (PTY.) LTD.

New York - Paris - Cape Town

London - Bonn - Gothenburg

Sydney - Toronto

TELEPHONE 838-7548

P.O. BOX 3966

JOHANNESBURG

Today's most efficient way to teach and learn!

Philips Electronic Aids Speed-up learning

Educational authorities throughout the world recognize the advantages of 'programmed learning' — the teaching method that consistently gets *excellent* results. Philips Language Laboratory and Closed-circuit Television make efficient use of this method. These two advanced systems prove a boon to both student and teacher.

Here are some of the many advantages

IN SOUND

Philips Language Laboratory:

- Speeds-up language learning.
- Gives students frequent practice in audio-lingual drills.
- Relieves the teacher from drill drudgery and enables him to give individual attention.
- Enables students to proceed at their own rate.
- Provides for class and/or individual instruction.
- Stimulates interest in language learning.

IN VISION

Philips Closed-circuit Television:

- Demonstrates laboratory and workshop processes to whole class.
- Links classrooms for special instructions to large number of pupils.
- Simplifies the study and teaching of micro-organisms.
- Enables records of important experiments or happenings to be made (video-tape recorder).
- Compensates for shortage of specialist teachers.

For further information, contact S.A. PHILIPS (PTY) LTD. Box 7703, Johannesburg. Phone 24-0531. Also at Cape Town, Durban, Port Elizabeth, Bloemfontein.



PHILIPS

P2662