Approved Products for the Spring/Summer Commodore PE



More Approved **Products Than Ever Before**

As part of our continuing policy to keep the Commodore PET the best supported micro-computer in Britain today, we publish the largest Commodore Approved Product Catalogue to date. Containing 8 pages more than in our previous catalogue, with more than 20 new products being featured.

A few products have also been withdrawn from the scheme, mostly software products which given the rapid advances being made by software houses in style and technique, no longer seem appropriate to the scheme.

We have a set procedure, which can take up to three months, before a product is finally granted Commodore Approval and many products fail to meet with our detailed require-

For the first time the Commodore Approved Product Catalogue contains details of products which are "Pending Commodore Approval" The reason for introducing this section is that we would like you to be as up to date as possible with the exciting developments in the field of PET compatible products, but at the same time we feel that it is necessary for us to complete our rigorous test procedures which include visits to mature reference sites before a product is givenitsfull Approved status in the catalogue.

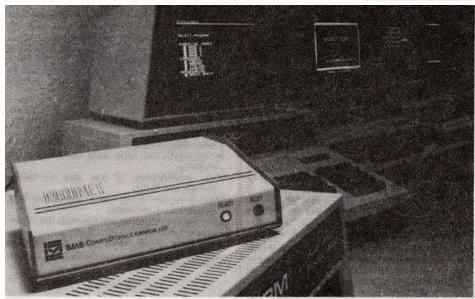
In our opinion the products in this catalogue provide useful extensions to the powerful capabilities of the Commodore PET. The following criteria are used to determine whether or not a product meets the standards required for Commodore Approval:-

The product is marketed by a reputable company, is well documented and performs according to specified criteria.

We have examined all Commodore Approved Products and we believe that they meet the standards defined by the above criteria. how-ever, it is the responsibility of the prospective purchaser to satisfy himself as to the suitability of any Commodore Approved Product for his own particular requirements and Commodore cannot be held responsible for any losses or damages occurring as a result of using Commodore Approved Products.

Should, in your opinion, a Commodore Approved Product not meet the published criteria, then you are invited to contact, in writing, the Market Support Manager Commodore Systems Division, 818 Leigh Road, Slough, Berkshire, and the matter will be raised with the product supplier.





Baroness International

Four, 8000 series PETS have been installed at Baroness International Public Relations. Th four computers are connected to one 8050 disk drive and a daisywheel printer by the MUPET. The system allows the four PETS to be used as workstations for word processing. It is envisaged that the system will be used to prepare articles, press releases and for general

Using the word processor for letters gives the

final output a very high standard of finish and with some enquiries being repeated time and again, it is possible to take a standard letter and by making only small modifications answer the question in a personal manner, whilst saving a great deal of time.

A 3000 series system running "PRESS" software complements the MUPET system, allowing Baroness to select media and mailing

How to get **Commodore's Approval**

ANDREW GOLTZ Market Support Manager

The "Officially Approved by Commodore" logo is appearing more and more frequently in advertisements in CPUCN, as well as commercial publications like PRINTOUT, PCW and PRACTICAL COMPUTING. But, what does it really mean when a product is "Commodore Approved"? Let's follow the progress of a typical application for Commodore Approval and find out.

will first ask the applicant to provide full written specifications of the product he proposes submitting for Commodore Approval. These are then considered in collaboration with Dave Briggs, Commodore's Technical Support Manager, and Dave Middleton who, as well as editing CPUCN, looks after "Approved" systems software and programmers' utilities.

Getting Approvol continued...

If it seems likely that the new product is a significant enhancement to the capabilities of the Commodore PET, the applicant is then invited for an interview at Commodore, Slough. He is usually asked to bring the prospective Approved Product with him for demonstration and will have a thorough grilling on his company's finances, his proposed distribution and marketing strategy, as well as on the technical specifications of his product.

Quite a few would-be "Approved Products" 'bite the dust" at this stage and in some cases the company concerned is recommended to collaberate with an existing Approved Product supplier in order to spread the costs of advertising and other promotional activities over more than one product.

If the applicant and prospective "Approved Product" survive the interview, the next step is for a number of the products to be sold to end users - and then to wait.

After a suitable period of time has elapsed, (this could be three months for new accounting software), the applicant is asked to arrange a visit to a number of end-user reference sites. These field visits play a crucial part in determining whether a product can really stand up to a harsh "real world" environment, is properly debugged and, in the case of accounting software, properly carries out the "month end" and "quarter end" procedures.

After the site visit, the applicant may be asked to carry out some modifications to the product, in which case he will be. again asked to provide new reference sites. However, if all goes well, the product is "signed up", contracts are exchanged and the new "Approved Product" takes its place in the next edition of Commodore's Approved Product catalogue.

More Information

If you would like further information on specific Commodore Approved Products and details of your nearest stockist, fill in this form, and send it to:-

Commodore Information Service 818 Leigh Road, Slough, Berkshire.

Send me further information on the following Approved Products: -

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Do you already own a PET System	YES/NO	C
Name		-
Position		
Address		



Business Software



Computer Systems

MAIL ORDER CONTROL

A powerful order control package designed specifically for the mail-order business but adaptable to other uses. Created with both the experienced and novice computer user in mind, to deal rapidly with telephone enquiries, produce printed reports on daily orders, order value summary by method of payment and by order souce, and all "live" records marked "urgent".

Features

Holds up to 3850 records.

Fast access to any record.

Copes with spelling mistakes in key field. Accumulates and sorts daily order values for auditing.

Easy modification of any part of record (except key field).

Printed report on all urgent orders not fully dispatched or refunded.

User input monitored continuously for errors. Standard stationery.

Consistent input from user (no manuals required).

Clear screen layouts.

£250 + VAT

MS

Microprocessor Services

COMPEC - COSTING

A professionally designed package structured to meet the needs of any organisation requiring an easy to operate method of accurately recording expenditure against cost centres. A typical application area would be a plant or vehicle hire company.

The 199 cost centres may range from Departments to Sites or Products to Vehicles - set by the user.

The expenditure to be recorded can have as many as 99 classifications, eg Wages, Materials, Fuel and overheads.

Descriptions of both the cost centres and the cost categories are easily changed to suit individual requirements allowing full flexibility in areas of application.

The system provides:-

Full Audit Trail of transactions.

Detailed accounting period tabulations of all transactions by cost centre.

Comprehensive Cost centre report totals by category within each cost centre.

Facility to carry costs over from one year to the next, user able to set budgets for individual cost centres.

Requires 32K PET, 3040 Disk Unit and Printer.

£250.00 + VAT

L&J

OUTSIDE SERVICES - COSTING, INVOICING & WAGES PACKAGE

A program which enables service companies to substantially streamline the preparation of wage sheets and invoices. Typical applications include mini-cab deliveries, field maintenance services, etc. In order to start using the program, customer and staff details have to be entered by means of the FILE PROGRAM.

Costs are then recorded using ENTRY PROGRAM, which prompts the user to answer questions displayed on PET's screen. As many entries as required may be made during each operating session. Subsequent sessions then add to the files. The files can only be cleared after a printout has been obtained.

The INVOICING PROGRAM automatically collates a customer's items and prints his bill. A variable surcharge can be added. VAT is calculated and added as appropriate. At the end of an invoicing session, a report is printed which summaries customer totals and VAT together with final invoice and VAT totals.

STAFF WAGE PROGRAM collates and prints out staff wages (in a wageslip format) with a deductible amount option.

Maximum Capacity 200 Customers; 90 staff; 4000 Customer items (approx.).

£220 + VAT

CASHBOOK

Cashbook takes the hard work out of entering up the Cashbook and analysing the figures.

The program has two main functions:-

- Entering up daily/weekly details with up to 20 separate headings. Simultaneously a printout of the entries is obtained with cheque, cash and balance forward totals. The entries are recorded and can be added to later.
- 2. Master printout of all the items accumulated in the data file. Items are grouped together under the appropriate headings, together with totals and new balances. Final totals give cash, cheque, previous balance and balance forward figures.

Items recorded are: code, date, debit/credit, VAT option, cash/cheque or balance forward and amount. Additional items can be defined by the user.

3032-3040	- 20 Field	£90 + VAT
3032-3040	- 35 Field	£100 + VAT
4032-4040	35 Fields	£110+ VAT
8032-8050	- 40 Fields	£120 + VAT

Dataview

Microcomputer Systems

MICROCLERK

Microclerk is a system for keeping textual notes and records on a PITT computer. This powerful machine code program is designed to undertake many of the tasks handled by a manual filing system. It consists of:

- A display editor for creating and correcting natural English records of notes, reports, letters, etc.
- A program to extract from a text all paragraphs containing key word(s) chosen by the user. The key words are highlighted and permit rapid identification of the information being retrieved.

Microclerk will also accept any BASIC files from other tape or disk programs and text files stored under WORDPRO and Dataview's WORDCRAFT.

The applications of the program not on include many filing tasks, but will be of intere in the. following situations

Minutes of meetings.
Recording sales call, prospect details, etc.
Inspection notes.
Records of site visits, surveys, etc.
Medical records.
Technical notes.
Reports and manuals.
Storage of diary inform ation

'File software is well supported both via many dealers and direct from the supplier. A comprehensive manual comes with the package.

£159+ VAT

1.1 LANDSOFT

HOTEL GB

GUEST BILLING SYSTEM

An elegant program which makes guest accounting extremely easy. No longer will the hotelier have the tedious job of entering 311 the accommodation charges each clay - tile computer does it automatically. It recognises the date and adds the charges to each guest's account. Even if it hasn't been used for a few days accounts are accurately updated.. the program will cater for up to 280 rooms and any guest's account to date can be called to the screen within 2 or 3 seconds simply by entering the room number.

When an account is called there is the opportunity to enter services simply by touching a key letter corresponding to an item on a 'menu' that is displayed. The list of possible service items can be whatever the individual hotel requires. 22 different items are displayed and up to 75 entries can be made against each account.

At the touch of a key the guest's account can be printed out on custoinised stationery with a copy for the hotel. Each bill is numbered. When a guest is ready to settle his account the tact is registered by touching a key to signify payment by cash or credit card.

it is also extremely easy to: Change a guest's room number, change the Accommodation Rate, or delete items from an Account.

An account is set up for a new guest by simply entering the Room Number, Guest's Name, Daily Accommodation Charge and Deposit, if any. The computer then automatically files this information ready to be recalled for Service Entries as they occur, or for Bill Printing.

Daily and period totals under each of the headings can be called to the screen whenever required. The totals show: Accommodation, the 22 Service items individually, Credits, Grand Totals, Grand Totals including Service Charges, Payments by cash, Payments by Credit Cards, Deposits. A code has to be entered before the totals can be called. The Daily Totals automatically Zero each. day and the Period Totals can be Zeroed, again under a security code, when desired.

The system also lends itself to use where the hotel has a non-resident restaurant simply by entering Table Numbers in place of Room Numbers and entering a Zero for accommodation. three figure numbers can be reserved for accommodation and two or one figure numbers for tables. if desired some of the 22 service items can be reserved for restaurant use so that more detailed restaurant bills can be produced.

PERPETUAL. CALENDAR

At the touch of a key the calendar can be called and any month displayed from the 18th century onward. It is completely accurate and automatically deals with leap years.

It can be very useful in a booking enquiry situation to immediately have a months calendar available for the following year.

£359 + VAT

HOTEL GB2

This program contains all the functions of HOTEL GB plus some useful additions. The main one being its ability to automatically bill and analyse for hotels catering for Bed and Breakfast, Half Board and Full Board.

On guest registration, the charges for the Accommodation, Breakfast, Luncheon and Dinner (if any in each case) are entered. The standing charge for Morning Beverage and Morning Papers can also be entered. During the stay these are then automatically put to the guest's bill on each day. For each day the bill will show the Accommodation and Meals totalled under 'terms. Morning Beverages and Papers will show separately.

However, the hotels totals analysis will give all the items for each day and period separately. The program can also be set to separate totalling for any non-resident meals.

Versions available for: Day Date Change hotels, Night Date Change hotels, Single Tile Disk for smaller hotels (under about 100% rooms), 3000, 4000 or 8000 series hardware.

£450 + FAT

HOTEL SF

GUEST BILLING PLUS ROOM AVAILABILITY

This program combines a more limited version of the above Guest Billing (140 rooms) together with a Room Availability system.

The program provides immediate viewing of the availability for up to 12 Flocks of rooms for 400 days ahead. A block of rooms are rooms of a similar nature, eg singles with baths. Each block can contain up to 99 rooms. The room blocks are initially defined and named by the user using the setting up procedure.

The program automatically advances the 400 day period as the date progresses. Even if the system 'has not been used for a few days the computer will analyse the date and make the necessary adjustments.

On entering a date the screen will immediately show the availability for all the blocks of rooms on that date PLUS the following six days. Without re-entering a date, at the touch of the '+' key the following 7 days can be screened and so on. The '-' key will take the date back 7 days. 'File screen also shows the day of the week for the date entered.

Booking (reducing the number of rooms displayed as available) is simply accomplished by pressing a key for the-blck required and then entering the number of rooms and the number of days. There is a protection against over-booking (which can be removed if requ fired) and over-cancelling.

£430 + VAT

THE BRISTOL SOFTWAFE FACTORY

TRADER

INTEGRATED STOCK-CONTROL INVOICING AND SALES ACCOUNTS

A powerful, real-time stock control, invoicing package with full management information, comprehensive reports and analysis.

TRADER is totally interactive. Stock levels, account balances, sales totals, etc. are instantly and automatically updated with each transaction. VAT, discounts, gross-profits, etc. are accurately calculated as each invoice, creditnote or other document is produced. Sales analysis and sales reports may be produced on demand showing sales volume and gross-profits against each stock item. Stock reports are available showing stock valuation, tow stock, outstanding orders, etc.

Reports showing tile current status of all sales-accounts may also be produced on demand.

Full details of any stock-item or sales-account may be looked up instantly, by any name or code designated by the user.

Stock

Each stock record contains the stock code, description of item, stores location, current stock, selling price, current cost, average cost, quantity on order, average stock, period sales total and gross-profit from sales.

Accounts

Each Account record contains the account name and address, current balance, last invoice number, last payment received, date of last payment received and aged balance.

Capacity

The total capacity of stock items and sales accounts is 2200 on a 4040 or 7800 or an 8050 Disk System. Distribution of records is dynamic so that it is possible to enter as many stock-items or sales-accounts up to a combined total shown above. No significant delay in operating time is evident with a large data-base.

£300 + VAT

ITEM

INTEGRATED, OPEN-ITEM PURCHASE AND NOMINAL LEDGER

A powerful management system to place overlleads and purchases firmly under management control.

Simple to use by the any member of staff. No previous computer experience is required.

ITEM controls all purchases on an invoice-byinvoice basis. Any supplier's account can be quickly examined to show invoices outstanding, invoice numbers and totals, and when they were dated and settlement discounts that may be due.

Remittance advices are printed under total operator control - selecting appropriate invoices for payment and rejecting others, enabling the operator to take maximum advantage of credit and settlement discounts.

The purchase ledger is fully integrated to the Nominal Ledger, which may be printed-out or listed on the screen on demand. So that expenditure analysis is instantly available, helping to trim overheads and keep costs in check. And, of course, the Nominal Ledger can include VAT analysis if required.

A comprehensive audit trail is automatically produced, saving a great deal of time and trouble at the end of the year.

Capacity

The system can handle a lot of data:

On a 4040 disk system 1000 Purchase Accounts, 200 Nominal Ledger Headings and 600 Active Invoices.

If the 8050 disk system is used there can be 3000 Purchase Accounts, 200 Nominal Ledger arid 18000 Active Invoices. Sufficient for even the largest company.

£300 + VAT

MONITOR

OPEN ITEM SALES LEDGER

Open Item management and accounting system to place outstanding credit firmly and simply under control

Simple to use by any member of staff. No previous computer experience is required.

MONITOR controls all sales on an invoiceby-invoice basis. Any customer account can be quickly examined, at any time, to show details of all invoices currently outstanding.

Statements may be printed, for either



Notes may be added to individual statements by the operator to prompt for payment, etc.

Full reports are available including aged-debt analysis over a three month period.

Full Nominal Ledger analysis is maintained of all invoices issued and this may, at any time, be printed out or listed on the screen. Of course, the Nominal Ledger can include VAT analysis if required.

A comprehensive audit trail is automatically produced, saving a great deal of time and trouble at the end of the year.

Capacity

The system has the capacity to handle up to 1000 Sales Accounts, 6000 Active Invoices and 200 Nominal Ledger analysis headings. Advance programming techniques enable fast access of any record.

£300 + VAT

STA GE ON E COMPUTERS

PETAID

PETAID is a sophisticated and powerful BASIC program structure and database manager. There are versions to run on most PET configurations

It provides for creating, amending, converting to new formats files and reports containing commercial mathematics, screen formatting and file formatting. Searching, sorting, indexing, immediate access via any alpha field.

Searching, reporting, deleting, creating of history files, creation of sub files, extension of existing files can be performed using any system index. Special facilities provide for the amendment of an existing record format by the addition of fields, the removal of fields or the change of headings and locations. The system will allow mathematics on the record to be changed at any time. Mathematical functions which are allowed arc: equal to, multiply, divide, add. subtract, compare, percentage, round, integer, exponent. Even if you have already established your database the system will allow for conversion of the database to the new format.

Full commercial mathematics are available within the file handling and the report generation, allowing for such complete applications as stock control to be fully set up and handled by the user including reports. Records can be viewed, nudged, printed under direct access. The system embodies a label printing facility providing for multiple labels. Part Commodore configurations can also be supported with different PETAID versions;

Stage One Computers offer a software support contract on PETAID which will provide the user with updates within the version number and advice and assistance on setting up PETAID or modifying its BASIC and machine code programs to tackle specific applications.

Comprehensive directory listings are available under program control. Multi-volume files are permitted for files which won't fit on one disk.

Access is allowed by only part of the keyfield or alpha field. Direct access allows "nudging" up and down the file. The system caters for possible common records within the same file.

PETAID Version 4.2 -- Keyed & Indexed Access Method Commodore Disk F250+ VAT

PETAID Version 4.2 & Report Generator S032 \$\frac{\pmathbb{E}}{250+}\$ VAT

PETAID Version 5.1 - Keyed & Indexed Access Method for 8032 \$\frac{\pmathbb{E}}{250+}\$ VAT

PETAID Report Generator (Page Format - PV4) \$\frac{\pmathbb{E}}{250+}\$ VAT

PETAID Auto Demo/Customer Training Disk (3000/4000 Series) \$\frac{\pmathbb{E}}{250+}\$ VAT

CompSoft Limited CREAM COMPUTER SHOP

DATA MANAGEMENT SYSTEM

Record keeping made fast and simple on the 32K PET

This program tailors itself to your own requirements, to store your information in the way you want, and to perform calculations on that information whenever you require it.



Main features arc:

- Rapid retrieval of information finds any records in 1-5 seconds.
- Performs calculation automatically on ALL the records on file or on pre-selected records, eg. rapid and accurate calculation of inventory values, discounts, across-the-board price changes, fees, VAT, exchange rates, sales figures, etc. . .
- Calculates and compares information with constants AND with other fields of infunnation, eg. on a stock file searches for all records where IN STOCK level is less than MINIMUM STOCK. Or, on sales records, it will add monthly sales figures to each other for annual totals.
- Searches on several c riteria. cg. everyone who lives in Yorkshire, and/or has a salary of 5,000 to 6,000 and/or joined the company/club before a certain date, anti/or has a 10% discount.
- Sorts the record on any field, either on alpha or numeric criteria, cg. name order, or invoice amount order or part number order, etc...
- 6. It has a unique link to WORDCRAFT and WORDPRO: selected information from selected records can be transferred automatically to Wordprocessed letters, thus saving hours and hours of typing time.
- 7. Prints labels.
- 8. Prints reports in a variety of formats.
- Files may be merged and fields may be added or dropped as required, eg_to insert results of calculations or to store information not initially anticipated.

10. Amends and updates information automatically.

II.Up to 13,600 records on an 8050 and 5000 on a 3040/4040 disk system.

Used in finance companies, all types 9f agencies, colleges, hospitals, personnel records. parts files, maintenance contracts, sales analysis. etc...

Completely takes over tedious clerical tasks, saves hours and produces real management information.

Written in BASIC with machine code sorts and searches.

Requires absolutely no programming skills.

THE CREAMWOOD BUSINESS CONTROLLER (SALES)

The C reamwood Business Controller is extremely easy to use and provides the full facilities of a POWFRFUL realtime sale+ledger program. This package, written by a professional software house with many years of mainframe/minicomputer business programming experience, is now available at MICRO-COMPUTfR PRICES-

It provides the following important features most businesses require:

The main ledger supports approx. 7511 accounts and 2750 transactions per month (can be extended without limit) and also prints VAT analysis.

prints VAT analysis.
Prints cash book, invoices, credit notes and cash paid journals.

Invoices/Quotations can be generated on the system and automatically posed to the ledger.

Postings can be made at any time to suit user.

Account History Transactions available at any time (without limit).

Instant comprehensive screen or hard copy display of account information as required is provided together with powerful analysis features.

Accounts are accessed by name or number Selective customer mailing list available on demand.

This program has been designed to run on a Commodore 8032 computer and an 8050 disk drive together with an 80 column printer either PET or ASCII.

A version designed to run on the 4040 disk drive is also available on request.

£300+ VAT



Micro Associates

PETROL STATIONS ACCOUNTING

The program has been prepared specifically for the production of monthly ledgers, eg. invoice sales; purchases; expenses; retail sales.

The program aims to:

- Reduce month-end work load in ledger production.
- 2. Remove errors in month-end totalling arid analysis.
- 3. Remove errors in daily entries.
- 4. Provide detailed analysis of sales and purchases.
- 5. Produce a VAT reconciliatiod

The program caters for the analysis of daily payments and sales for four distinct ledgers. (Each ledger handles up to 120 entries.)

Invoice Sales

Eg. Service Bay, giving the following information:

Invoice Ref. Number; Goods Value; VAT Component; Analysis of Sales; Oil; Parts and Materials; Labour Costs; MOT Charges.

Purchases

Eg. Goods/Suppliers, giving the following information

Invoice Ref. Number; Goods Description; Goods Value; VAT Component; Suppliers Ref. Number; Analysis of Purchases; Petrol; Oil; Parts; Materials; Equipment; Sundry Expenditure; Minerals; Vending Machines; Cigarettes; Sweets.

Expenses

Eg. Overheads, Rent, etc. giving the following information:

Goods Description; Goods Value; VAT Component; Analysis of Expenses; Rent% Rates; Heat/Lighting; Telephone; Post/Stationery; General Equipment; General Repairs; Motor Expenses; Sundry Expenditure; VAT Payments; Management Drawings.

Retail Sales

Eg. Counter Sales, giving the following information:

Credit Sales; Credit Receipts; Sundry Receipts; Petrol Sold (galls); Goods Value-, VAT Component; Analysis of Retail Sales; Petrol; Cigarettes; Car Wash; Oil; Sweets; Minerals; Accessories.

The major advantages of the program are:

- A. Substantially reduces errors in book-keeping and reduces account auditing costs.
- B. The user is able to produce an audit trail for all entries arid retain a security file.
- C. The month-end records are sorted and totalled giving complete reconciliation of monthly entries. (Also the VAT on total goods supplied is calculated, for comparison with the summation of the daily entries.)
- D. The VAT component is calculated for each of the daily entry invoice records for validation of sales/purchase invoices.
- E. Analysis of expenditure/inconne can be undertaken for up to 10 headings per ledger and validated against the total value. This ensures that the correct individual entry has been made.
- F, Provision can be made for individual customer/supplier accounts to be produced as requested.

£250+ VAT





FILEPROG

Fileprog is a general purpose disk-based record filing system, incorporating print routines.

The program will allow creation and subsequent updating of up to 3000 records, each containing company name, contact name, address, telephone number and notes. 'tailored versions are available to provide more records or other information in the records.

There is a search arid display facility, to allow visual display of records found by company name, together with the option to print what is on the display.

There are seven different print facilities to print records for individual companies, all records containing a specific sorting code, a mailing list for self-adhesive labels by sorting codes, a mailing list for all companies and a company list facility, which prints all company names together with the associated notes, but without addresses.

Fully self-checking back-up routines are included for both blank (new) diskettes and existing back-ups to ensure data on file cannot be accidentally lost.

Files are organised to allow a maximum of 200 records for each letter of the alphabet, although the overall maximum is 30110 files.

The program is 'menu-driven', that is to say a list of options is displayed, and the user selects the one appropriate to the task required.

£140 + VAT



NEWSBOY

Newsboy is an accounting arid distribution system which handles the retail newsagent's tasks of keeping accurate, current records of his customer accounts for newspapers and periodicals.

Newsboy updates customers' records to account for:

- 1. Payments.
- 2. Shortages.
- 3. Substitutions of non-delivered papers.
- 4. Price Changes.
- 5. Delivery Charges.
- 6. Holidays.
- 7. Changes in customer requirements.
- 8. Changes in customer details.
- 9. Miscellaneous purchases

The newsagent can operate the system at his point of sale, where he can look up his customers details and receive payments to update their accounts.

Newsboy saves the newsagent time when changing prices, and calculates the effect of customer holidays on the order to his wholesaler.

Comprehensive analysis facilities enable the newsagent to plan his orders for newspapers and magazines week by week, thus reducing the problem of over ordering.

Newsboy has been developed to be simple and straightforward in use, while giving the newsagent a powerful, time-saving aid to his business.

GOLD

GOLD is a costing and invoicing system for use in the manufacturing jewellery trade. It enables costing information to be adjusted quickly and straightforwardly, and maintains the best selling price for your products at all times.

GOLD offers these advantages to the large and small manufacturing jeweller:

Immediate re-costing of all products on entry of a new precious metal price.
Up-to-date full or partial price list print

available at any time.

Costings can be adjusted for individual

costings can be adjusted for individual items or a specified range as and when required.

Visual display or print of current costings information available at the touch of a button.

Invoices produced by entering quantity arid product number only.

Automatic extension, totalling and printing of invoices.

GOLD is simple to use. Its comprehensive facilities will save you time arid mistakes, and enable you to price your goods competitvely in the light of changing costs, at all times.

£575+ VAT



Computer Services Midlands Ltd.

TIME RECORDS COSTING

The Problem

In very many professional practices, accountants are an ideal example, the recording of time spent arid bills incurred whilst working on clients accounts is of vital importance. Only by maintaining accurate records can the partners be aware of the work in progress against each client and consequently the amounts which may be realistically billed. Since each employee usually has a different charge rate, and many employees may work on the same account, many hours are often spent manually in maintaining up-to-date records.

The Answer

By using Time Records Costing this time can be drastically reduced to only minutes per week whilst instantly providing all the relevant reports necessary to the partnership. The system caters for up to 1,000 clients, 100% employees and three work types per client from nine types available. The information is held as follows:

1. Client Cost Information

This includes reference number, name and address, work in progress, cost balance, chargeable expenses total, interim bills total and the breakdown by three possible work types of the hours and cost allocated by any number of employees.

2. Employee Cost Information

This includes name, charge rate, time analysis this period and year to date.

3. Work In Progress Information

This holds up to 12,000 client/employee totals which are used when analysed by either client or employee to give a comprehensive current position of either.

Reports

A detailed summary of the work in progress against any client may be obtained including analysis by three work types, total expenses, hours, interim bills this period and year to date. Also included is the current cost recovery figure and reports may be selected by partner, office or even firm if required. Employee reports show the analysis of time sheets over the various work types by time and by cost for the current period and the year to date.

All data input is validated by rigorous error checking routines so as to minimise invalid data entry.



VATMAN

VAT RETAILERS SPECIAL SCHEMES

This program is designed to assist accountants providing a VAT service to their clients, it will also benefit the trader completing his own VAT forms. Providing not only the complete VAT computation for all the current special retailers schemes, but also valuable analysis of purchases and printed records of prime entries.

Fast and Accurate

Input to the system is of two types; daily takings and purchase invoices. Comprehensive validation checks ensure that errors are minimised. All inputs are stored on disk and can be reviewed and/or amended at any time. Input time is minimised by allowing abbreviated entries and default values.

Easily Auditable Reports

The reports produced by the system for a complete set of books for VAT purposes and are easily verified.

Takings Report. Grouped into weeks and printed in date order.

- Purchase Day Book. Analysed by expense code.

VAT Computation Worksheet. All necessary information for VAT return.

Period End

The programs deal automatically with end of period procedures, including scheme adjustments, where applicable. The frequency of VAT returns can be defined for each client as can the VAT rates in operation.

£450 + VAT (to cover all schemes) 1250 + VAT (to cover one scheme)

INCOMPLETE RECORDS FOR ACCOUNTANTS

A comprehensive incomplete records system designed to greatly speed up the preparation of clients' accounts by practising accountants.

A truly comprehensive package developed from over four years' experience writing and installing bespoke systems for accountants. Each client's records are recorded on a single disk which, if used year after year, will build into an extensive historical file of financial The main analysis program admits financial entries grouped by type (eg. Sales Day Book, Cash Payments, etc.) with analysis over 200 nominal accounts each of which may be defined for each client. The program handles debits and credits automatically and completes the double entries. The main control accounts are continuously displayed and updated during input. Special features, selectable at any state, include VAT analysis, fixed nominal code, display any account balance, comment on any entry, display bank and cash reconciliations and instant recall of previous entries.

No matter what source documents are used, the program produces full records to the form to which the accountant is used. These records include full audit trail, trial balance, full or selective nominal ledger including comments, VAT summary for up to 13 periods. The program will print full final accounts including comparative figures, with variations for limited companies, partnerships and sole traders. The accounts produced are Trading Account and Schedule of Overheads, Statutory Profit and Loss Account, Balance Sheet, Schedule of Fixed Assets, Partnership Capital Accounts and Source and Application of Funds.

The system has been designed to drive either the Commodore Printer or a high quality Daisy Wheel Printer enabling the Final Accounts presentation to be of the highest possible standard.



COMACCOUNTS - MICRO 30/40,80

A fully integrated accounting system which supports 800 Sales Accounts, 800 Purchase Accounts and 400 Nominal Accounts enabling up to 24,000 postings to be made each month. The large nominal ledger will permit a highly detailed analysis of sales and purchases, if required.

The current month for a given ledger is kept open item, ie. the individual amounts for transactions, with dates, for that month are shown for each account number.

'Brought Forward' balances are field for the preceding three months. In this way, monthly statements for sales ledger customers are produced, together with Aged Analysis of debtors and creditors and transactions listing of Nominal Ledgers.

All inputs to the system are monitored and an audit trail is produced with checksums un batches of input documents.

A special consolidation facility allows the user to cope with situations where the limit of 800 accounts (in the Sales and Purchase Ledgers) is exceeded. Month end procedures are simple and straightforward.

Input System

- Input of invoices and credit notes to Sale and Purchase Ledgers.
- 2. Transfers within Nominal Ledgers.
- 3. Cash received and paid.
- 4. Account set-up and amend.

Output System

- Immediate details, and aged balance, available on any named account.
- On demand Trial balance and aged analysis of debtors and creditors.
- 3. Nominal Ledger transaction listing.
- Sales Ledger statements.
- 5. Purchase Ledger transaction listing.
- 6. Label p inting for statements and mailing list.
- 7. Comprehensive Audit Trail.
- Profit and Loss Account and Balance Sheet
 with facilities for budget, variance and comparatives.

The Comaccounts Micro 30/40 and Micro 80 package includes COMBIS and CONISTOCK.

Micro 30/40 £750 + VA T Micro 80 £950 + VA T

COMINV

An optional program, which works in conjunction with COMACCOUNTS, giving the user the following additional features:

- 1. Invoicing the user may specify exactly which information is to be printed.
- 2. Sales Analysis -- by up to 10 product groups.
- Automatic posting into the COM A000UNTS Sales and Nominal Ledgers.

£150+ VA 7'

COMBIS

Essentially a computerised card index, COMBIS allows the user to define up to 10 sections (fields) within a record.

Up to 2000 records can be stored per diskette, instantly recalled and easily updated. A larger number of records can be spread over several diskettes. Up to 24 characters can be recorded in each field, giving a total of 240 characters storage per record.

A single key sort facility makes it possible for the user to sort records into alphabetical or numerical order.

When the data base has been entered the program really begins to get clever. As well as displaying all the records or printing out a complete list, selective searches can be made.

"A list of all sales prospects in HUDDERS-ELD", or the names and addresses of all suppliers of BALL. BEARINGS" can be immediately obtained by keying the appropriate parameter. Up to 10 parameters can be specified at one time, eg. "properties in SURREY, with FOUR BEDROOMS, TWO GARAGES, near a RAILWAY STATION"... and so on. Numeric comparisons can also be easily made: "More than TWO BEDROOMS", "under £ 100,000".

The program can be used in conjunction with Commodore's Word Processing program for automatic letter writing and address lists can be directly printed out onto self-adhesive labels with the aid of the Commodore 3022 printer.

L150+ VAT

COMSTOCK

The following information is instantly available on each stock item:

4000 items

Stock number (enables COMSTOCK to keep track of your stock).

Alternative stock number (the one you or your supplier normally use).

Description.

Total quantity in stock.

Number of items on order from supplier.

Number of items on order from customers.

Costs and sale price.

Re-order level.

Total sales (year to date).

Unit of sale.

Printed Reports

The following reports can be printed at any time:

A list of all stock items below order level.

A complete report of the current stock position, including the sales and cost value information with the items below re-order level highlighted.

A report of stock movements for the current period a vital security feature.

In addition COMSTOCK can be used to print out a stock take form for manual stock taking - and subsequent to the stock take allows the stock position to be reconciled accordingly.

£150 $\pm VAT$



Applied Computer Techniques Limited

PETPLAN

THE PROFESSIONAL BUSINESS SIMULATION

Overview

Petplan is a business planning game which is used extensively by business students, practising business managers and by people who are interested in how a business operates.

MicroVersion

This game is a micro version of a very successful 'big' computer model which has been used and enhanced over many years on management development programs.

The Business

The game simulates a business which produces a product called 'Petal', It sells to a market over which it has some degree of control. It is free to change its manufacturing selling and financial policies to suit its objectives.

No. of Players

The game may be played by a single player or by a team of players, so up to four. A team can consist of a 'board' of directors comprising, for example, finance, marketing and production directors and a managing director.

Objective

The player may set his own objective(s). A fairly obvious objective is tile one that maximises return to the shareholders. It should be noted that the stock market expects earnings on capital employed to be three times the current loan interest rate.

Caution

Petplan is a unique way of discovering how a business works. You will not solve it by trial and error. There is no one solution. Petplan has great depth and yet is simple to use. The more you use it the more you will learn about business and its management.

£60+ VAT

Computastore

PAYROLL

Specially designed for the first time user, this powerful payroll system makes wage calculation fast, easy and accurate.

The operator only keys in those items which vary from period to period, eg. expenses, units produced, etc. The computer does tile rest. It calculates the gross pay, before and after tax adjustments, tax, NI and pension (if applicable), down to net pay and prints a payslip in duplicate. When the run is complete, it prints totals and a coin analysis.

The clear screen layouts and detailed user manuals, combined with the speed of processing (40 sees. per employee, inc. printing and payslip) makes this system ideal for any small to medium size company.

Tax and NI updates available.

£185 + VAT (on cassette/ £195 + VAT (on disk)

Word Processing

Dataview

WORDCRAFT 80

Word Processing has been accepted as the most significant way of reducing tile cost of typing and WOODCRAFT 80 allows tile popular Commodore Microcomputer to be used as a professional Word Processing machine.



The program is designed for tile typist and incorporates many unique features that allow easy creation and editing of text. Text is seen on the screen in the same layout as will appear on paper, right up to typing widths of 117 characters and page depths of 98 lines. And what is on the screen, which is uncluttered and free of 'control' characters, can be edited easily and swiftly. Indeed, tile screen formatting and editing is of a similar style to the big, dedicated Word Processing machines. Some of tile features of WOODCRAFT 80 are:-

Page layouts of up to 117 characters wide by 98 lines deep.

Screen displays format of document, no wrap-around.

Handles tabs, indentations, decimal tabs and

columns.
Automatic centering and right margin justi-

Automatic centering and right margin justification.

Headers and trailers on each page as well as automatic page numbering, even bookfashion (alternate left & right sided).

Character, word and paragraph deletion and insertion.

Block movement of text from one page to another.

Automatic merging of text say, paragraphs, to form documents.

Merging of standard letters with name &

address files.

Handles single sheets or continuous

Half line spacing for subscripts and super-

Character string research, identify and/or

Powerful printer routines to provide automatic underlining or emboldening, variable line and character spacing.

WOODCRAFT 80 supports all major 'Daisy-wheel' printers as well as most matrix printers including the Commodore range. Also available is the option to output WOODCRAFT 80 files on to disk in ASCII format for onward use by other programs. This facility is intended primarily for use with MUPET. Both MUPET and MPS 'multi-user' systems are supported by WOODCRAFT 80.

All disk housekeeping can be accomplished without having to exit from the program and WOODCRAFT 80 comes complete with a most comprehensive Manual and Training Workcards.

With other 2500 users both at home and overseas, WOODCRAFT 80 has been acknowledged by many to be one of the most professional programs for the Commodore Business System

Professionel Software

THE WORDPRO SERIES

The WordPro Series of word processing software introduces a family of software designed specifically for Commodore CBM/PET computers and compatible dot matrix or letter quality printers. There are three levels of program sophistication, ranging from a low cost basic editing system to one that brings you virtually every important feature of the dedicated word processors costing thousands of pounds more. Whichever WordPro series is right for you, you'll find it extremely easy to learn ... and just as easy to operate. The WordPro Series brings you the very latest advances in high speed, efficient commercial word processing, at the same time saving you thousands of pounds in tile cost of such a system.

Professional Software recognises benefits offered by easy to understand manuals, quick reference guides, key stickers, and application support all of which accompany the purchase of WordPro programs. The time spent learning these versatile programs is extremely short and WordPro systems can be up and running in most offices in nearly no time at all.

Because every office has its own specific needs, WordPro was developed to accommodate varying degrees of sophistication; from a cassette program for basic text editing to the latest version of WordPro 4 *PLUS* with a mathematical function included in the program.

Some of the features that have made the WordPro Series one of the best selling Commodore programs are: Global search and replace. "headers and footers", decimal tabulation, forced paging, right alignment, access to special thimble characters, printer comments embedded within the text, variable block insertions (manual or automatic), continuous printing; plus new features such as: superand sub-scripts. bold face printing, wide pitch selection (from 8, 10, 12 or 15), cold start to BASIC, audio feedback, multi-user disk output, numeric tabulation, and simultaneous input and output.

Word processing can now be expanded into further areas of the business environment. Consequently, other Commodore Approved Products are available to link with WordPro: the Cumpsoft DMS Database Package and Amplicon's Fileprog mailing list program. Time linking of any of these programs with WordPro truly enhances the flexibility of the WordPro ... and of course WordPro is totally compatible with tile MUPET h.

WordPro 1 cassette program £2S + VAT WordPro 3 PL US program £275 + VAT WordPro 4 *PLUS* program £395 + VAT



Business Peripherals

CENTRONICS

CENTRONICS(R) PTI

The Centronics PT1 is a dot matrix printer offering a print speed of 120 characters-persecond. It uses bi-directional, logic seeking features to maximize throughput (up to 260 lines per minute). Other features include a 9 x 9 dot matrix with the 96 British ASCII character set and an external interface compatible with the Commodore PET IEEÈ-488 interface port.

Standard features include:

120 cps print speed, bi-directional, logic seeking, 132 column, 10 epi horizontal, 6 lpi vertical, 8 ips slew rate, tractor feed (adjustable), paper out indicator, auto motor control, elongated character by line, manual line feed switch. column scale and tear-bar, 7 meg ribbon cassette, 9 x 9 dot matrix, acoustic cover, 96 British ASCII and IEEE-488 external interface.

£1,142 + VAT

CENTRONICS(R) PT2

This model has the same standard features as the Centronics 1'T1, but offers in addition a full 2 x 96 PET character set, including 64 graphics symbols and a sub-set of graphically displayed inverse video control codes.

The external interface box provides code conversion allowing access to the graphics sub-set by a switch which is set by the operator depending upon the operational mode of the system.

Additional features to the PT I include:

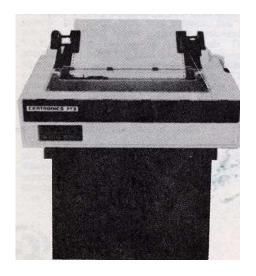
2 x 96 PET character set including 64 graphics symbols and inverse video codes, forms over-ride switch.

£1,215 + VAT

CENTRONICS(R) PT3

The PT3 is a high speed dot matrix printer offering all the features of the Centronics PT2 but at an increased printspeed of 150 charactersper-second and higher throughput possibilities (70 to 340 lines per minute). 15 ips forms slew rate.

£1,430+ VAT



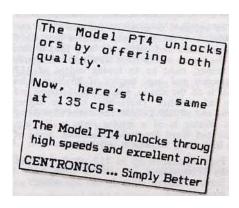
CENTRONICS(R) PT4

The Centronics PT4 is a single pass, bi-directional high density dot matrix printer. This printer provides for both normal mono-spaced text for data processing, and high quality proportional text suitable for word processing applications. With a print speed of 130-150 characters-persecond, the micro-processor controlled PT4 offers up to five times faster throughput than most daisy wheel printers at near letter quality. The PT4 uses a nine pin free flight print head to form characters consisting of up to 9 vertical and 18 horizontal dot placements.

Additional features to the PT1 include:

Both proportional (130-150 cps) and monospaced (100 cps) printing, mono-spaced PET character set, proportional spaced ASCII character set, 15 ips slew rate, extremely high quality character generation.

£1,430+ VAT



BAR CODE READER

A printed strip carries the information to be read, coded in the form of a series of vertical bars which are either thick or thin. These special labels can include up to 28 characters, and can be supplied as pre-printed sequential numbers or random numbers to suit an existing system.

In operation, a hand-held pen containing an infra-red light source is traversed across the surface of the label; coded information is converted to ASCII data and transmitted to the terminal. The label may be read from either direction, and neither the pen angle nor speed of traverse is critical. Visual and audible alarms are provided, and operate if the data received from the pen is not correct. The electronic system performs a check operation on all data before transmission to the terminal.

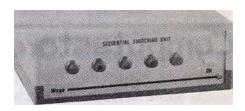
Applications of the system include stock control, goods inwards records, quality control procedures, record systems and point-of-sale terminals. The main advantages are excellent data integrity, no computer operating skill required and the ability to locate the bar code, reader remotely from the terminal.

The equipment is supplied complete with the Commodore compatible IEEE-488 interface and an RS232 output, self-contained AC power supply and 'ready', 'error' and 'repeat' indicators. IEEE primary address, parity and transmission rate are internally set and user variable, The unit is physically similar to the Commodore 3040 Floppy Disk Unit.

Wego Computers Ltd

WEGO SEQUENCE SWITCH BOX Mk.IV

Allows the PET and up to 4 peripherals to be connected to the mains and with one switching operation (and only one mains lead from bench to socket) all devices are powered up in the correct sequence. On switching off powering down is done automatically in the reverse order.



Specifications: Input: 240v 50Hz; Output: 5 x 240v 50Hz at IA each, 1kVA total; Sequence timing: Approximately 2 seconds between each switching operation.

Supplied complete with 5 neon indicator lamps, 5 x 3-pin 2A plugs and 3-core mains lead 2m long.

£75.00+ VAT

MARK SENSE CARD READER

- Easily programmed using a pencil and a card. Automatic turn-on and card feed.
- Compact and lightweight-
- Accepts any length card.
 - Ideal for business and education applications.

Now all you need is a 2B pencil, a card and the WEGO MARK SENSE CARD READER to enter data into your microcomputer. It's the simple, low cost alternative to keyboard data

Applications are virtually endless. The Wego Mark Sense Card Reader is ideal for Education Applications, such as teaching programming and marking multiple choice questions with full grading and reporting. (An introduprogram for this is included in the price.) (An introductory

£620 + VAT

Banner

BATTERY BACK-UP SYSTEM

The Banner Mains Standby Power Unit provides an uninterruptible sinusoidal AC power supply source for computers, data terminals, point of sale devices or any other similar electronic equipment which requires a 'no break' supply for protection against loss of its incoming AC mains supply.

The purpose of this unit is to prevent an uncontrolled shutdown of a computer or similar system and then allow the system to continue functioning on the internal battery during the duration of an AC power failure.



The length of time for which the equipment can be operated on battery back-up is dependent on the rating of the internal battery provided. Time periods available as standard are either 15 or 60 minutes, although other periods can be made available to meet customers' special requirements.

The equipment consists of an Inverter power supply, Battery charger and controller/regulator together with the maintenance free rechargeable sealed lead acid battery. All the controls and indicators are mouhted on the front panel for easy access and operation.

£629 + VAT

VOLTAGE REGULATOR

Mains voltage 'noise' has been a long standing problem for computer users working in an environment where heavy duty mains loads are frequently switched. All too often the results are frequent hardware failure and/or corrupted data. This voltage regulator gives a high level of transient suppression and is ideally suited to the power requirements of the Commodore PET and Floppy Disk unit.

£147+ VAT

Davidson-Rich Systems Ltd

HIGH RESOLUTION COLOUR PRINTER

The CX80 is a PET compatible colour printer offering 7 colours. print needle addressing, user programmable and extended character facilities.

Colours are selected by control codes in the BASIC program and are printed from a tricolour ribbon. The full range of PET graphics and reverse characters are supported. There programmable line and form feed, and characters may be mixed with graphics on the same line.

Technical Specification

Uni-directional dot matrix at 150 cps; 80 columns; 5 x 7 matrix for characters; 6 x 7 matrix for graphics; 6 or 8 lines per inch spacing; 160 characters buffer; size 191mm x 413mm x 325m; IEEE 488 interface.

£895 + VAT

COLOUR DISPLAY INTERFACE

The PTX40 connects a PET to a colour T.V. and allows the display of Full TELETEXT characters and graphics in 7 colours. Selected characters may be flashed, concealed or released on Command from the PET, or displayed as double height characters. The display on the T.V. screen is quite separate from the PET display.

Technical Specification

Plugs into the memory expansion port on the PET and the aerial socket of a 625 line PAL colour T.V.; separate power supply; 96 alphanumeric characters plus 64 graphics on a 3 x 2 dot matrix; colours are: red, yellow, green, blue, cinnamon, magenta, white-

£185 + VAT

www.commodore.ca May Not Reprint Without Permission

These new ROMs for any standard 32K version fo the PET provide a number of useful routines in a convenient plus-in form (right hand ROM socket), thus retaining 31743 Bytes Free and adding the following facilities:

Turnkey Disk Loader

Simply switch the PET ON, shut the disk flap and press the space liar twice. Full screen prompts

Enhanced DOS Support Active as soon as the PET is switched on.

Stop Mute and Repeat Key

Tw^o essential features for making finished programs safer and easier to use. The TI clock is left ticking!

Full Screen Input System

What the business programmer has been looking for! The cursor is constrained to prompt fields printed on the screen and can move between them. A 'HELP' facility may be included using the 'STOP' key. The field contents are supply converted to BASIC string variables of the programmers choice. Commands are included to return the cursor to a specific field to allow amendment of a reply, and all fields erase. BASIC 4 versions include the ability to receive and send screen fields directly to and from a Relative File making the production of filing systems using DOS2 a simple

Screen Save

Screen Save to memory and return in a faction of a second, particularly useful for saving Screen Input System fields for later recall.

Screen Dump

Screen Dump to Commodore printer allowing immediate copies of the screen contents, including upper case, lower case and graphic characters. Reverse fielded characters are characters. Reverse fielded characters converted to standard.

Bullet Proof Input Routine

No more null return bomb-outs or over-length replies. Program defined receiving variable and response length limit.

Directory Display

Directory Display of a selected disk, with optional output to the printer and filename pattern matching.

£120 + VAT

MITRELYNN

ACOUSTIC COVER FOR THE COMMODORE PET

The acoustic cover is designed for applications where the Commodore printer is used in a noise sensitive environment. It will reduce the noise of the unit by over 80%.

The cover and base arc manufactured in a tough fire resistant ABS plastic, having an attractive leather grain finish. The interior of the cover is lined with an unfaced self-extinguishing polyurethane foam to get extinguishing polyurethane maximum noise absorbency. foam

All the function areas, eg switches, etc. have easy access and for paper changing or maintenance the cover simply lifts off.

Viewing of the printing is via a Perspex window on the removable lid.

£65 + VAT

JCL SOFTWARE Agricultural Software



SUPERCOW

SUPERCOW is a high specification management and record-keeping program for Dairy farmers. It provides up-to-date information (most of which cannot practicably be obtained in other ways), which can be used to monitor the performance of the herd week by week, and to identify problems much earlier than would otherwise be possible.

The main features of SUPERCOW are:

- Individual cow records: full information on a cow's current lactation history, including cumulative yield, feed and margin over concentrates (calculated automatically), service and veterinary information.
- 2. Automatic feed allocation for up to 12 groups of cows.
- Brinkmanship: average milk yields and feeds by monthly calving group.
- Calving intervals: calculation of the predicted calving interval for the herd or group, plus a very useful chart showing individual breeding performance.
- Results of service: bull fertility and cow conception rates.
- Veterinary analysis.
- Group selection and ordering: groups of cows, selected by yield, calving date, lactation and group number can be examined separately and listed in six different orders. This procedure can be used in any section of the program, and is very helpful in pinpointing the cause of any problems.
- Reports can be printed at any time.

Great care has been taken to make sure that SUPERCOW is "friendly". The records are quick to enter, and the computer can easily be operated by farmer, manager or herdsman. Several herds can be kept on one machine.

It is a cassette-based system so that it will operate with full reliability in any farm or dairy office in spite of dirty or damp conditions. While in use, the program and all data (max. 250 cows) are held in RAM, thus giving fast operation.

SUPERCOW is designed to increase the profitability of dairying, and only a small improvement is needed to pay for the system in

£800 + VAT







ARABLE GROSS MARGIN PROGRAM

A program for up to 100% fields and 10 different farms. It is also intended as a field diary. (200 Fields on one 8000 series system.)



The following information is first entered in the computer:

The crop history of all fields for the last five years, plus current crops; varieties; OS No; acreage.

Up to 20 different fertilizers ordered for the coming year, with costs.
50 different cultivations and costs per

acre, plus control figures. These control figures can be your own from previous years or ICI costings or costings provided

The computer will then provide print-outs on:

- Crop history.
- Fertilizers used and quantity left in store.
- Analysis of field or crop. A complete field diary to date.
- Gross margin for each field and crop.

(The cost of cultivations do not appear in the gross margin figures, but are shown separately for reference only. the control figures are shown alongside all the costs and gross margins and can be compared with your own to indicate whether or not there is room for improvement.)

Other features of this program are:

- A form to be filled in by the man in the field and presented to the office weekly or when required.
- A facility for updating at the end of the year, avoiding the need for entering the crop history more than once.

In addition to calculating gross margins it is ideal for monitoring individual cultivations and fertilizer or spray chemical applications.

> 8000 Series £400 + VAT 4000 Series £350 + VAT

Peripherals



MUPET - MULTI-USER PET SYSTEM

MUPET gives the Commodore range a powerful multi-user capability by allowing from 2-8 PETS to access a common disk unit and printer through a specially developed IEEE controller.

- Multi-user disk system allows up to 8 users.
- Completely hardware interfaced.
- Handles data and program files.Supports 3000, 4000 and 8000 systems.
- Supports any PET compatible printer and interface.
- Supports standard versions of WORDCRAFT and WORDPRO 4.
- Optional print spooling facility available.



relieves this contention by providing the printer

or any peripheral device spooler with a separate IEEE bus Completely software transparent.

As well as its use in printer spooling, the Double MUPET is designed to allow simul-

taneous access to more than one IEEE

communications bus. For example heavy use of

the printing function normally dedicates the

MUPET bus to one user. The 'Double MUPET'

- one system. - Local and remote IEEE 488 bus operation.
- A total hardware interface.
- Optional printer spooler interfaces available.

- Multiple 'Double MUPETs' may be used in

Applications

Multi-station wordprocessing.

- Remote data acquisition.
- Local and remote disk drives.
- Local and remote IEEE devices (test equipment, modems, digitizers, etc.).
- and software development
- Have multiple printer simultaneously accessible (high speed and letter quality).
- Data entry stations (scientific and business).

3 MUPET system £595 + VAT Each additional PET link £125 + VAT Double MUPET £2111 + VA T Double MUPET & Printer spooling £250 + VAT

Where can MUPET be used?

The system can be used where the speed and reliability of a disk based system is mandatory, multiple work stations are required and cost is major consideration. For instance MUPET with either WORDCRAFT or WORDPRO is a natural application.

In education MUPET allows a library of programs to be available to a number of students all working at their own speed and provides a facility for rapidly saving, recalling and printing students own programs.

How far apart?

PETS using MUPET are daisy chained together by a ribbon cable which is connected from the MUPET controller to a special module on the IEEE port of each PET in the system.

PETs can be used up to 18 ft apart with a maximum total cable length of 60 ft from the controller to the last PET in the chain.

As with a single user system, when a printer is being used the IEEE bus is busy and no PET can at this time access the disk drive. A special MUPET module has therefore been developed for when large volumes of printing are required. This module can be used on any PET in the daisy chain and allows that PET to have a printer attached directly to it, as well as to have access to the common disk and printer.

versions of WORDCRAFT and WORDPRO 4 allow printing to be directed via the disk to this dedicated printer. Whilst printing is taking place, the IEEE bus is not busy and the disk can be accessed by other PETS in the system.

The Spooler machine is not totally dedicated to spooling programs and files. When the spooler function is not required the machine is available for normal use.

Kingston



The KC NETKIT, for multi-purpose low cost PET communication

Designed and developed by Kingston, the NETKIT is more than an interface, it is a hardware/firmware package, that dramatically widens the scope of the PET.

Main Features

The NETKIT consists of interface hardware and 2K of machine code.

Permits safe high speed exchange of programs and data between a PET and any other RS232 device (up to 4 800 Baud).

Allows the PET to be linked to a wide range of fast/slow printers, time sharing systems,

Transforms PEI into a smart of dumb terminal, allowing it to be externally controlled for all functions from say a mini of main frame.

Gives full character conversion - useful in programming and in communicating with devices such as paper tape readers/punchers for analysing NC machine times and creating high speed telex tape

Share processing and programming between

Converts ASCII files into PET tokenized BASIC.

Gives ten new SERIAL BASIC commands. Easy to install inside the PET.

Installation instructions and detailed operating manual included, together with three operating support programs, which assist in making the NETKIT simple and easy to use, with no complicated machine code required.

£ 135 + VAT12 months parts and labour guarantee



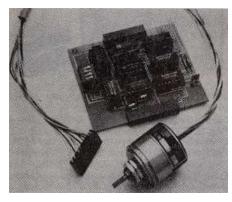
SHAFT POSITION ENCODER C030C WITH USER PORT INTERFACE

The C030C is an absolute (parallel data) 8 bit Optical Shaft Position Encoder able to resolve 360° of mechanical rotation into increments of 1°24', and is ideally suited for communication with mechanical systems in the outside world.

To avoid the possibility of untrue readings being made, a special control system code known as "Gray" is used. The sequence of binary numbers in the Gray Code are arranged in such a way, that for each increment of rotation, only one of the 8 bits changes state.

The C030C is supplied with an addressable interface circuit board which decodes and latches the signal from the C030C.

For single Encoder operation power can be taken from the PET"s spare cassette port. In multiple Encoder applications (or where both cassette ports are in use) an optional cased Motherboard with power supply is available, into which the interface cards are plugged.



Max. number of interfaces per Motherboard: Max. number of Motherboards:

The interface is also compatible with and will plug directly into the GarnmaTrol PR176 system.

Connectors are fitted to the interface for connection to User Port connection lead, cassette port (for power), Encoder and the GammaTrol Interface Systems PR 176.

include Applications Position Control Systems, Data Logging of mechanical movement, X Y Axis Control, Robotics and many others.

C030C Encoder with Interface

£328.25 + VATUser Port Connecting Cable and Cassette Port Power Cable L 14.90+ VAT Case containing Motherboard and Power Supply £83.86 VAT

OMB ELECTRONICS

STATIC EXPANSION MEMORY

This system offers significant advantages over others available in that:

It is static

This means that, unlike dynamic systems, data cannot be lost while the central processor is engaged in long operations and the necessary refresh request is not granted in time.

It is expandable

The system consists of a four-slot housing which can accommodate up to four 8K cards, which can be obtained separately, so that it can be used to add from 8K to 32K to PST's infernal memory in 8K steps.

It is external

There is no need to open up the PET (or to invalidate the warranty). Internal systems generate heat which raises the temperature inside the PET, leading to an increased risk of faulty operation. This system stands alongside PET and plugs into the mains and to PET, using the protected connector provided.

It is reliable

All memory locations are 100% tested over the full temperature range before despatch. In the unlikely event of subsequent failure, the diagnostic program provided will help to locate the problem.

It is guaranteed

The mother unit and 8K cards are guaranteed against faulty materials or workmanship for 12 months.

It is versatile

The standard unit is intended for 2001 series 8K PE Ts, but 4K PETs can also be matched. with a maximum additional capacity of 4K plus 24K (i.e. a total capacity, internal and external of 32K). 8K PETs can be augmented to a total overall capacity of 40K, of which the last 8K is addressable in machine code only.

> SK £156 + V.9 T 16K £234 + VA T 24K £312 + VAT 32K £390 + VAT 8K Card £78 + VAT



CHROMADAPTOR - COLOUR INTERFACE FOR PET COMPUTER

The Sadektronics CHROMADAPTOR enables your PET computer to produce stunning coloured pictures on an ordinary colour television set.

Features

- Sixteen colours available under software control.
- lligh performance 8MHz UHF modulator for a crisp display.
- Audio output via PE T's user port available from television speaker.
 - High quality 12" x 9" x 3'/:" metal casing.
- Fully assembled, tested and guaranteed.

Background and foreground colours are individually selected for every screen

- character location.
 Allows all of PET"s characters and graphics to be programmed in colour.
- Absolute simplicity of operation and programming. Simple conversion of existing black and
 - white programmes to colour.
- Background and/or foreground colours of total screen area may be changed using only three instructions.
- All facilities available using either BASIC or machine code.
- May be used with old or new ROM PET'S.

- Single printed circuit board for reliability.
- Built-in mains power supply unit
- All British design and manufacture to suit U.K. television system.
- Plugs directly into domestic television aerial socket.
- R.G.B. output for colour monitor available

Documentation

- Full instructions provided.
- Free colour games and demonstration
 - programmes provided.
 All connecting leads included, even a 13 amp mains plug.

£295 + VAT

MONADAPTOR

AUDIO-VISUAL T.V. INTERFACE FOR PET COMPUTER

The SADEKTRONICS MONADAPTOR is a completely self-contained unit which reproduces both SOUND and VISION from the Commodore PET Computer on an ordinary UHF television set. A picture of black on white, or white on black can be selected by the user according to

Mere seconds are needed to connect the MONADAPTOR to the PET as it simply plugs directly into the PET's 'USER' and 'SECOND CASSETTE PORT'. Both of these connectors are duplicated on the MONADAPTOR, thus retaining all the expansion facilities of the PET.

The MONADAPTOR comes ready assembled and tested, including its own television aerial nothing else to buy.

We guarantee that you will be impressed by the clarity of both picture and sound. No corners have been cut - the highest quality components have been used throughout, including an incredible 8MHz bandwidth UHF

£45 + VAT

VDesign Ltd.

PET PERIPHERALS FROM MTU

HIGH RESOLUTION GRAPHICS

This provides for the storage and display of a 200 x 320 dot matrix on the PET monitor using internally mounted hardware.

The software included provides BASIC commands for plotting points, lines and text. When not in use it also provides a very useful 8K bytes of extra memory.

£320 + VAT

MUSIC SYNTHESISER

The board contains a digital-to-analogue converter, a low-pass filter to remove switching spikes and a tow power audio amplifier which will drive a small speaker or a hi-fi system.

Using the sophisticated music interpreter software provided, it is possible to compose, synthesise and perform 4-voice harmony with complete control over waveform, pitch, note duration and rhythym.

£57+ VAT

INSTRUMENT SYNTHESIS SOFTWARE

Software for use with the above hardware to provide a highly sophisticated synthesis process that simulates the attack and decay envelopes of real instruments.

L.30 + VAT

PROM-1/0-PROGRAMMER

This single board allows both the programming and use of custom ROMs and EPROMs and the interfacing of other equipment via an RS232 serial port and 32 separate parallel ports, including 4 pairs of handshake control lines and maskable interrupts.

L211 + Interface to suit if required



Interfaces

TAPEPREP AND TELEXPREP

The production of telex messages using a telex machine is slow and inflexible, and ties up the telex machine. An obvious alternative is to produce the telex tape "off-line" (away from the telex machine). If this is done using a microcomputer other possibilities immediately come to mind.

Once the message is keyed in it could be printed out on a fast printer for checking by the originator, and stored on a magnetic medium such as floppy diskette for later recall. When the inevitable corrections and second thoughts arrive the message could be recalled and edited (no need to re-enter from scratch), and only when transmission is agreed would a tape be punched and fed into the telex machine.

TELEXPREP allows you to do all of this and more. It will even read back paper tape.

A similar paper tape production problem exists with NC and CNC machine tools. Although some such tools allow program input and checkout at the machine this would seem to be waste of valuable production time. Again the capability of keying in NC programs offline, then storing, editing, listing and punching them as required offers a cost-effective increase in flexibility and throughput.

TAPEPREP is the program to do this. It too allows input from paper tape for further editing, conversion of old tapes for new tools, storage of existing tapes, etc. Since the NC program is stored as a sequential file of text it is straightforward to write utility BASIC programs for standard conversions, toolpath checkout, syntax checking, etc.

TELEXPREP is designed to run on an 8032 with any compatible disk drive. T1 LEPREP is available for 3032, 4032 or 8032, again with any compatible drive.

Tefexprep £300 + VAT Tapeprep £300+ VAT

FORMS RECEIVING TRAY AND PRINTER STAND

The Taylor-Wilson Forms Receiving Tray is designed to fit the 3022 and 3032 printers. It feeds continuous stationery up a viewing ramp and into a stacking tray.

Tray £17+ VAT

The Taylor-Wilson Printer Stand compliments the Receiving Tray. It includes a shelf to take a box of continuous stationery, and is of an all steel construction, finished in black.

Stand f49 + VAT

PETALECT

LARGE KEYBOARD

Large keyboard for 8K PETs. (Connects directly $_{
m to}$ 4K and 8K PETs, no special software required.)

£85.50+ VA T

ELECTRONIC BALANCE INTERFACE

Any electronic balance may be interfaced to any computer in the Commodore range allowing the PET to be used on line to process weights.

£186 + VAT

36

small systems engineering limited

FULLY BUFFERED MICROPROCESSOR BASED PET INTERFACE (GPI-AP)

This unit is a version of the Small Systems GPI (General Purpose Interface) programmed to implement Commodore PET IEEE 488-RS232C serial interfacing. The GPI is particularly suitable for applications requiring data 1/O rates too fast for the PET to handle in BASIC.'.

Standard Features

Switch selectable listen and talk addresses; Full PET disk compatibility; Software selectable Baud rates over the range 50-19,200 Baud, with a default setting of 300 Baud; Full input buffering for GET, also special input buffering with automatically inserted carriage returns to prevent the PET Hanging up when using BASIC INPUT statements; Standard buffer size 200 characters; Software selectable code conversion modes to match ASCII output to PET screen display for either Upper/Lower case or Upper case graphics; Full RS232C handshake.

Optional Features

20mA Coop 1/O Opto isolated, active or passive; Separate Baud rates for Input and Output (software selectable); Second serial 1/O port.

£249 + VAT

BI-DIRECTIONAL IEEE-88 SERIAL INTERFACE TYPE B

This self-contained interface enables a variety of system configurations to be set up with standard serial devices acting as peripherals to an IEEE-488 bus controller (cg. theCommodore PET), or for such programmable IEEE 488 controller to act as an intelligent terminal to a mainframe through its teletype port.

The interface is fully addressable and compatible with the Commodore Floppy Disk

The unit is fully addressable from the IEEE-488 bus. LISTEN and TALK addresses are link selectable. The unit is normally supplied set for LISTEN address 4 and TALK address 6.

The transmit and Receive Baud Rates are crystal controlled and independently selectable to all standard rates from 50 to 19,200 baud.

Serial signals may be either 20mA current loops or RS232C standard via a flying cable wired with a standard D type connector. Connection to the IEEE-88 bus is also via a (lying cable wired with either a hooded connector to suit the Commodore PET IEEE-488 port or a standard 24 way IEEE connector.

RS232C handshake lines (RTS, CTS, DTR) can be provided at no extra cost.

Mains ON and LISTEN and TALK state LED indicators are provided on the front panel. The unit is fully fused, and supplied with its own mains cable, power supplies being internal to the device.

The interface incorporates a code conversion facility—for lower case printing using the Commodore PET.

Units are available at no extra cost with switchable code conversion modes to match text print out to either Upper/Lower case PET display or Upper case graphics. UNIDIRECTIONAL IEE-488 SERIAL INTERFACE

 $T^{\rm h}_{\rm iS}$ self-contained parallel-to-serial interface enables standard serial devices, such as printer, VDUs, or teletypes to be driven from the IEEE-488 bus by controllers such as the Commodore PET 2001 computer.

The interface is fully addressable and compatible with the Commodore Floppy Disk

The primary LISTEN address is normally set to 4. Other addresses are link selectable on the PCB.

The crystal-controlled baud rate is internally switch-selectable to all of the standard rates from 50 to 9,600 Baud.





Serial output is in the form of 20mA current loop or RS232C signals via a flying lead with its own standard D-type connector. An RS232 handshake line (terminal BUSY) is provided. Connection to the IEEE-488 bus is also via a flying lead wired with either a hooded connector to suit the Commodore PET IEEE-88 port or a standard 24 way IEEE connector.

MAINS ON and LISTEN state LED indicators are provided on the front panel. The unit is fully fused, and supplied with its own mains cable, power supplies being internal to the devices

Custom units can be supplied with special code sets.

Units are available with switchable code conversion modes to match text print out to either Upper/Lower case PET display or Upper case Graphics.

Software

The interface is supplied together with a suite of short BASIC programs to run on the Commodore PET, to illustrate the various capabilities and modes of operation in different configurations.

£120+ VAT

TV/VIDEO MONITOR INTERFACE

Video and UHF output (plugs into aerial socket of domestic TV).

£35 + VAT

PET EDGE CONNECTORS (with cover)

IEEE: User Port 2nd Cassette interface £3+ £4+ VA7 VA7



DISK COMPATIBLE UNIDIRECTIONAL PARALLEL INTERFACE

This interface unit enables parallel devices such as Centronics or Anadex printers to be driven from the IEEE-488 bus.

The interface is fully addressable and compatible with the Commodore Floppy Disk Unit.

The interface is a self-contained unit complete with power supply, leads and connectors.

The Listen Address is normally set to 4, other addresses are link selectable on the PCB.

The unit is normally supplied fitted with a standard 36 way Centronics connector. Other connectors can be fitted if required.

Mains ON and LISTEN LED indicators are provided on the front panel.

Plug in 'custom chips' can be supplied to meet any special code conversion requirements, eg. PEI' to ASCII for Upper and Lower case.

Units are available with switchable code conversion modes to match text print out to either Upper/Lower case or Upper case Graphics.

£106 + V4 7'

Direct Data Markethg Ltd

D.D.M. BI-DIRECTIONAL RS232C INTERFACE

For many users of the Commodore PET, type-writer quality printing is essential. Large numbers of Commercial Companies, Professional Practices and Educational Centres have found that adding fast typewriter-styled print enables the PET to match the performances of many substantially more expensive word processing and accounting systems.

In order to achieve the compatible marriage between the PET and the wide variety of alternative printers, a compact Interface has been developed which is located INSIDE THE PET to convert it to the RS232C standard. This device is proving particularly attractive, where communications use is envisaged. Since it is directly compatible with Modem based systems.

The Interface has the following features:

Equally compatible with 3000, 4000 or 8000 series.

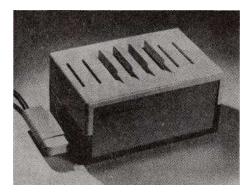
- Fully addressable.
- Fully chainable for additional peripherals.
- Switch selectable speeds up to 9600 Baud.

 Three months warranty.
- Crystal controlled.
- Świtch selectable odd/even parity.
- All cables and fixing brackets for connection to the PET are included.

£175 + VAT

2 Analogue Input Boards. 2 Analogue Output Boards. Digital Output (16 bits). Digital Input (16 bits). Pulse Counter Board. Dual Fail-Safe Watchdog Board.

This flexibility is a distinct advantage in the face of the changing and varied tasks for which a PET is likely to be used, as different signal boards may very easily be added to the master unit



The Interface system takes its power from the PET via the second cassette port and data is transmitted via the User Port. Connection of the Interface takes a few seconds using the cable supplied, and the IEEE and memory expansion ports are left free for the connection of peripherals.

The software used to run the Interface is very compact: the input or output of data may be accomplished using just two lines of BASIC. This simplicity reduces the tune taken for one input or output operation to about 25 ms, which is an advantage for real-time applications. The BASIC software supplied is fully independent of machine code and is, therefore, suitable for both old-ROM and new-ROM PST's. By using machine code, the speed of data transfer may be reduced to about 60us per operation.

The Interface is supplied with a test and demonstration program on tape or disk, covering all the possible input and output options, and comprehensive documentation to assist the user

Master Unit (with cable and connectors, software and manual) L230 + VAT Signal Boards:

Pulse Counter (16 bit)	£120 + VAT
Analogue Input (8 bit)	£150+ VAT
Analogue Input (12 bit)	£195 + VAT
Analogue Output (8 bit)	£155 + VAT
Analogue Output (12 bit)	£220+ VAT
Digital Input (16 bit)	£120 + VAT
Digital Output (8 bit, opto-	
isolated)	1160+ VAT

Watchdog Failure Monitor

£130+ VAT

1120+ VAT

Medical

Medicom

PRACTICE MANAGER

A practical computer system for General Practice designed to control and print repeat prescriptions, maintain an age/sex register and monitor patient care.

Features

- Repeat Prescription writer.
- Repeat Script monitoring.
- Age/Sex Register.
- Patient Registration.
- Practice Address Book.
- Selected Mailing Labels.
 Patients Problem Lists
- Patients Problem Lists.
 Disease Registers and Attendance Reports.
- Patient Recall.
- Age Croup Follow-ups.
- At Risk Follow-ups.
- Items of Service Reports.
- Workload Analysis for Epidemiology and Audit.

The Practice Manager is composed of three elements. Each element is self contained, but a special coding system gives each patient a unique practice manager (P.M.) number allowing cross comparison of information where required.

The number is approved by the BMA for data transmission being only unique within a single practice. It is suggested that for convenience it is written on the outside of the patient envelope and every therapy card held by a patient.

Full patient name and registration details can only be retrieved after first entering a password and thus, confidentiality can be maintained within the practice.

All systems have been designed for operation by ancilliary staff requiring minimal involvement by a busy GP.

REPEAT PRESCRIPTION

The essence of the repeat prescription facility is that a standard prescription for a given patient need only be typed once when the therapy is first prescribed. Thereafter by entering the patients I'M number duplicates of that original prescription can be produced on authorised D H S S conitnuous prescription stationery.

The system automatically notifies the receptionist when only one more script is authorised advising that the patient must see the doctor next time. If no further reissues are allowed a prescription can not be issued until re-authorised by using a special password.

Up to 1100 therapy cards can be kept on each disk organised alphabetically or according to PM number. Any number of disks may be used.

The system provides comprehensive reports on:

All patients on a given drug.

All therapy records.

All patients whose therapy is due for reauthorisation.

All drugs currently being prescribed.

AGE/SEX PATIENT REGISTER

This maintains normal registration details for each patient together with a list of major problems, 10 per patient, and up to 6 important dates

Groups of patients may be selected and details printed:

Name and address labels for recall. Select patients by age, disease, sex or any combination.



PET INTERFACE SYSTEM

TYPE PR 176

The GammaTrol Interface System allows communication between the PET and a variety of external devices. It consists of a master unit which connects to the PET and signal boards which plug into the master unit. The master unit will accommodate up to eight signal boards. Nine different types of signal boards are available, and any mixture of these may be used. For example, one master unit could support the following:-



Up to 13,000 patient details can be kept. These are organised in manageable alphabetic groups for each sex. Each section would normally beused in rotation so that at regular intervals all records are reviewed and updated.

PRACTICE MONITOR

provides comprehensive Monitor information on all patient consultations. The system offers unprecedented opportunities for doctors interested in preventive medicine, regular patient review, epidemiology and audit.

Details of up to 19,000 patient consultations in a specified period may be recorded for each group of 3 doctors. Period information can be automatically added together to produce year

Each patient visit is recorded on an appointment slip using the PM number to give the patients identity, sex and age and a 3 digit code based on the RCGP's classification of 600 diseases, to record the reason for the visit.

This information is used to monitor all consultations within the practice. Disease registers are created automatically and monthly follow-up lists produced. All patients seen in a given age range may be identified and all those seen for a particular reason.

> Repeat Prescription £400 + VAT Age/Sex Register £400 + VA T Practice Monitor £400 + VAT Complete Practice Manager.Svstem: £1,100+ VAT

PHARMACYSTOCK

Medicom's 'Pharmacy Stock' is a Drug Stock Control system with a facility for drug labelling. The system is ideal for a General Practitioner with a dispensary or a High Street pharmacist.

Drugs are referenced by user-generated alphanumeric keys of up to 8 characters. There is no predefined structure for this so that an existing coding system can be used or an easily remembered memonic coding structure generated, eg. BRUIOOMG for Brufin drug in 100% mg tablets.

The following information is recorded for

Drug name; Form of drug; Strength; Unit of strength; Container size; Container unit; Pack size; Pack type; MUMS cost; Re-order level; Number dispensed.

New drugs can be added, enquiries made and discontinued drugs deleted. Stock levels, or order quantities and numbers dispensed are updated by the recording of issues and receipts. The reports available are:

Stock Evaluation; Alphabetic Stock List; Turnover Report; Slow Moving Drugs; Audit Trail; Stocktaking Report.

In addition there is an easy to use facility for rapidly generating labels with dosage details for patient prescribed drugs.

The system allows recording of up to 2600 drugs lines per disk.

£400 + VAT

Construction and Building Software



CLAREMONT CONTROLS LTD

CONSTRUCTIONAL SOFTWARE

STRUCTURAL ANALYSIS

These programmes use a developed form of the Stiffness Method for the elastic analysis of frames. They have a wide variety of applications in the fields of Structural and Civil Engineering and will analyse frames in any material whose properties are known to the user (eg. steel, concrete). The configuration of the frame is entirely flexible and could include applications as diverse as steel portals and concrete culverts.

There are three programmes in the series:

Stiff plane frames KEYPAC 2 Pinned plane frames KEYPAC 3 Grillage

Each programme plots the frame on the VDU to check geometry and stores data in easy command strings which may be saved for future reference acid amendment. Any consistent units may be used and all the various loading options on nodes and members may be combined either singly or in multiples. Deflections are output for nodes and forces are displayed for members at nodes. The input data is printed with the relevant output.

Details of each programme follow:

analysis of Rigidly Jointed Plane Frames under inplane loading

In excess of 50 nodes and 100% loaded

Loading options on members

point loads in component x or y direction

UDL in any direction

dead loading due to self-weight

- triangular load perpendicular to member Loading options on nodes

loads in component x or y direction loads in component z direction (rotational) settlement in x, y or z direction

Restraints

any node may be restrained in x, y or z direction or any combination thereof

Output

x, y and z deflections for each node axial, shear and moment forces for each member at each node

KEPAC 2 analysis of Pinned Plane Frames under inplane loading

Up to 2011 nodes

Loading options on nodes

loads in x or y direction

settlement in x, y or z direction Restraints

any node may be restrained in x and y direction

Output x and y deflections for each node axial force and stress for each member at each node

KEYPAC 3 - analysis of Stiff Frames under orthogonal loading

Up to 50 nodes

Loading options on members

vertical point load

- UDL acting on any section of a member
- trapezoidal or triangular load on a member
- partial triangular load torsional point load
- torsional distributed load

Loading options on nodes

- vertical load moments

restraints

settlement

Output

vertical displacement and two rations for each node

shearing force and moments at nodes for each member

Keypac 1, 2 & 3 may be used with tape or

Keypac 1 £265 + VAT Keypac 2,C245 + VAT Keypac 3 £320 + VAT

Manuals are available separately for f 7.50

DRAINAGE DESIGN/ANALYSIS

This series is for the design and analysis of drainage systems- 'the configuration of the system is entirely flexible and computation is completely automatic.

One programme is currently available:

KEYPAC 20 - Stormwater run-off by Lloyd Davis

The programme calculates the minimum sizes of pipes to cater for the peak discharge and gives all relevant information to time engineer who may then call up different pipes for specific information or amend data for differing conditions. Data may be saved for future reference and amendment using screen edit with moving cursor. The input data is printed with the relevant output.

systems to a maximum in excess of 100% pipes

Features

standard pipe sires from 150mm

individual pipe sizes may be fixed 1, 2, 5 & 10 year storm return periods selectable (all data is embedded in the programme)

pipe sequence automatically ordered

Output

pipe sizes full hydraulic data

maximum discharge maximum velocity

concentration time

total contributing area

pipe roughness

Keypac 20 may he used with tape or disk.

Keypac 20 £265 + VAT Manual available separately for £ 7.50

ENERGY ANALYSIS

At present there is one Contructional Software programme in this field and it is dedicated to the design and checking of the thermal performance of a building against Part FF4 of tile Building Regulations.

HEAT LOSS Ff4

This programme enables the designer (or Building Control Officer) to check and amend, rapidly and with accuracy, the compliance of a building with part 1°F4 of the Building Regulations. If the building will satisfy the programme it will also satisfy the Regulations.

The areas of the walls, roofs and suspended floors together with glazing details are given to tin! computer followed by LI-valves. The designed building is then checked against the target set by the Regulations and either passed or rejected. In the first case amendment is then invited; in the second case amendment is mandatory and the process is repeated until a satisfactory solution is obtained. All the options of trading-off rooflight allowance against windows etc. are inbuilt and automatic.

A U-valve calculator is incorporated which may be used alone or may be sunmoned at any point when a LI-valve is requested by the programme.

A full print-out is produced which is suitable for submission to the Local Authority for approval.

The programme is fully interactive and easy to use and comes complete with a short, but complete manual.

Heat Loss FF4 may be used with either tape or disk

Heat Loss FF4 £85 + VA T Manual available separately for £2.50

PROJECT CONTROL & MONITORING

At present there is one Contructional Software programme in this field and it will analyse a critical path network of just over 100% activities.

PRENET

Any project which can be represented as a network of inter-related tasks may be analysed by this programme which uses Precedence Network techniques.

Data is set up in simple data strings which may be saved for future reference arid amended by screen editing with a moving cursor.

Output to •screen or printer consists of:

event number earliest start time latest start time float time minimum project completion time activities on the critical path are highlighted

Prenet may be used with tape or disk and will also run on a 16K computer, but with a considerably smaller network.

Prenet £130+ VAT
Manual available separately for £5

STRUCTURAL DESIGN

This programme has been designed so that a quick estimate may be made of what steel beam will he needed in a straightforward situation: it is particularly useful in the early design stage before full structural design is begun. It is fully interactive in its operation.

AUTOBEAM STEEL

Data for 63 standard beam and joist sections is embedded in the programme giving a range of sizes from a 76 x S 1 RSJ 6.7 to a 914 x 419 UB 388. The beam is assumed to be simply supported and may be loaded with up to three load types made up of one of each of the following: UDL, point load and triangular load. Lateral restraint may be included.

Out of the 63 sections in memory the lightest suitable section is automatically ;elected having been checked for bending stress and deflection. Shear and web buckling are not included in the calculation and may involve additional manual checks in certain circumstances.

All results are ne atly tabulated on tile screen and the printer including the deflection and all relevant sectional properties.

Autobeam Steel will operate with either tape or disk.

Aumbeam Steel £85 + VA T Manual available separately for £2.50

COSTA C 2

Application

This program is a powerful tool for use by the office manager to provide immediate information for the control of resources compared with income per job. Any job may be reviewed in two or three minutes and revised or updated in little more. The immediate feedback of the system facilitates a quick appraisal of the current status of the jot) and thus encourages rapid response.

Scope

A computer file is opened for each job (100 max) and includes a job name and reference code. Each job is broken down into a maximum of ten stages of work. The user allocate s to each item of the ten stages a percentage of the total job together with the total net fee.

A personnel file carries up to 100% staff, storing name, code and hourly rate of pay. Job and personnel files may be revised and updated at any time. Time spent by assistants is rapidly entered against jobs and each item of the ten stages of work carrying up to ten assistants.

Comprehensive display/print options are open to the user to provide rapid information on staff involvement, budgets, expenditure, fees billed /received etc. For a quick appraisal of a job a bar-chart may be displayed on the video screen indicating budget and expenditure on all ten stages.

£300 + VAT



Computer Services Midlands Ltd.

REPLACEMENT WINDOW SYSTEM

The CSM Replacement Windows System automatically calculates all material and glass requirements, together with all the sundry items necessary for production. Customer orders are stored on disk and works orders raised on request which include the window drawing, order details, aluminium cutting list, glass sizes and accessories. This data then links in to an automatic costing routine which gives an accurate costing with a wastage allowance. Material utilisation information is also updated and period/year to date consumption recorded.

One important feature of the system is that the user may define all his own window styles on the visual display unit and does not, therefore, rely upon them being pre-programmed for hire

£500 + VAT

Micro Associates

BOILER & GENERATING PLANT EFFICIENCY

Introduction

The program evaluates the operating performance of central boiler plant and generating equipment, ie. turbo generator plant, diesel generators. It also can be applied to specialist applications such as a c ombined heat and power plant and heat pump/solar panel applca-tions.

The program compares current performance from operating results, input to the computer by the plant operator or test engineer, with design performance expected of the plant.

Results Provided

The results cover such items as: Dry flue gas loss: Wet flue gas loss; Final feed temperature; Turbine condenser vacuum; 'turbine pressure and temperatures.

Total losses and cost of losses are evaluated for any specific change of state or for a complete change in all plant data.

The effect of changes in load are readily evaluated and where more than one item of plant exists a plant room summary of target and actual operating performance is displayed, together with an overall (composite) plant room operating performance.

£200+ VAT



Scientific Interfaces



Digital Design and Development



DIGITAL DESIGN Br DEVELOPMENT

IEEE-488 INTERFACE FOR X-Y PLOTTER WITH PEN LIFT CONTROL

A PET compatible X-Y plotter interface, with pen-lift control, is available from 3D. This unit enables IEEE-488 bus controllers to output graphical information to any analog plotter via the IEEE-488 bus.

Technical Specification

Resolution in both X and Y: 8 Bits. Monotonicity: Full 8 bits. Settling Time: 1 micro sec. Output Voltage: 0-2.5v or 0-5v (customer specified).

Both X and Y output voltages are simultaneously presented. Pen lift control relay contacts are provided. The interface is completely addressable from the IEEE-488 bus, with the address internally link selectable (customer may specify).

The unit is supplied in an attractive case complete with its own power supply, fuse, ON/OFF switch, indicators, mains lead, IEEE-488 bus to PET connector, and BNC output terminals for X, Y and 4mm terminals for penlift control.

£200 + VAT

IEEE-488 COMPATIBLE 16-CHANNEL RELAY UNIT

A PET compatible 16 channel relay unit is now available from 3D. This unit will allow the closure or release of each individual relay under program control, since each channel is individually addressable.

The unit meets the IEEE-488 standard bus requirements, with the primary address internally link-selectable (customer may specify).

The interface is supplied complete in an attractive case, with self-contained power supply, ON/OFF switch, fuse, mains leads, indicators etc.

Relay contacts are brought out to frontpanel insulated 4mm terminals, with a LED indicator associated with each relay to show whether it is operated. A PET IEEE-488 connector and lead is also supplied. **Technical Specification**

No. of relay contacts available: normally 16 s.p.s.t. Relay power capability: 100v, 0.5 amp, IOW. Operate and Release Times: less than 1.5ms. LED for monitoring Closure and Release of each relay.

Mains-switching relays with contact ratings of 250V AC, 250mA may be supplied as an optional extra.

£350 + VAT

IEEE-488 COMPATIBLE 16-CHANNEL, 8 BIT ANALOG-TO-DIGITAL CONVERTOR UNIT

A PET compatible 16-channel, 8 bit analog-todigital convertor unit is available from 3D, enabling your system to monitor variations in as many as 16 analog signals.

Technical Specification

Resolution: 8 bits (1 in 256), Non-linearity: • //4 LSB. Zero Error: +- 1/2 LSB. Conversion time: approx. 150 micro sec.

The unit is fully addressable from the IEEE-488 bus, with address internally link-selectable (customer may specify).

All input signals are single-ended, buffered with a high input impedance operational amplifier. The input voltage ranges internally selectable as either 0-2.5v, 0-5v or 0-10v (customer may specify).

The unit is supplied in an attractive case, complete with its own power supply, fuse, ON/OFF switch, indicators, mains lead, and BNC-type input connectors. For a small additional charge the customer may specify alternative input connectors.

Readings may be easily obtained from BASIC using GET, or alternatively a machine code program is available for fast data acquisition.

£300 + VAT

IEEE-488 COMPATIBLE 8-CIIANNEL, 8 BIT DIGITAL-TO-ANALOG CONVERTOR UNIT

A PET compatible eight-channel 8-bit digital-toanalog convertor unit is now available from 3D. This unit enables IEEE-488 bus controllers to output analog voltages to eight independent channels.

Technical Specification

No. of channels: 8. Resolution: 8 bits. Monotonicity: Full 8 bits. Settling time: 1 micro sec. Accuracy 0.19' (2.5v range), 0.5`4 (customer may specify).

The output voltage may be specified by the customer, and is buffered by a voltage follower operational amplifier lie. ow impedance

output). The interface implements the IEEE-88 bus protocol, and is completely addressable from the bus, with the address internally link selectable (customer may specify).

The unit is supplied in an attractive case, with its own self-contained power supply, fuse, ON/OFF switch, indicators, mains lead, IEFE-488 PET connector and lead, and front panel BNC output sockets for each channel.

£350 + IA T

8-CHANNEL, 8 BIT (OR 16 BCD DIGITS IEFE-488 COMPATIBLE DIGITAL DATA ACQUISITION UNIT

A PET compatible 8-channel 8 bits each (or two-binary-coded decimal digits) digital data

acquisition system. This unit enables IEEE-488 controllers to collect digital information from instruments such as digital voltmeters or counters or from contact closures, etc. Data can be read from peripheral data sources as single bit, nibble or bytes.

Technical Specification Parallel Data Transfers are 8 bits wide.

System may be configured as either: 8 channels of 8 bits; 4 channels of 16 bits or 4 channels of 4 BCD Digits.

Positive or Negative 5v logic, handshake signals are provided between the interface and the digital instrument providing the data: polarity, pulse-width, etc. may be customer specified.

The interface is completely addressable from the IEEE-488 bus, with the address internally link-selectable (customer may specify).

The unit is supplied in an attractive case with its own power supply, fuse, ON/OF switch, mainslead, and PET-IEEE connector.

£400+ VAT





Programmers Utilities

ACT

Applied Computer Techniques Limited

PROGRAMMERS' FRIEND

The Programmers's Friend is a disk hased machine code program, which provides an extra 12 facilities to help in debugging BASIC programs.

- AUTO provides new line numbers when you are entering BASIC program lines.
- RENUMBER renumbers either all or part of a BASIC program, including all GOTO's and GOSUB's
- DELETE removes all lines within a specified range.
- FIND locates and displays all program lines that contain a specified string.
- MERGE inserts another program or subroutine into the middle of the one currently in memory.
- DUMP displays the names and values of all the variables used by your program (excluding arrays).
- HELP. If your program stops due to an error, HELP displays the offending line and where the PET detected file error.
- TRACE. As a program runs, file last six line numbers being executed are shown in the upper right corner of the screen.
- STEP. Executes one BASIC program line and stops. Pressing SHIFT executes the next line. The number is displayed in the upper right corner of the screen.
- 10. OFF. Turns TRACE and STEP off.
- 1 L BREAK inserts a breakpoint into a program at a specified line number without losing the values of program variable.
- 12. UNBRK removes a breakpoint if one has been set.

£25.00+ VAT

JCL SOFTWARE

JCL SOFTWARE

The JCL SOFTWARE range of Assemblers and Programming Aids are specifically designed for the PET user without access to a floppy disk drive and who has to rely 'on the standard cassette drive as a mass storage medium. The ASMPAC series of assemblers include all of the necessary facilities to Input Assembly Language Text, Edit the Text, Assemble into memory and then Disassemble back to the screen. Object code files may be produced for processing by the AUTOLOAD and AUTOSTRINGS programs, and Assembly Language Text files may be Saved and Loaded. The key feature of all versions is that after initial loading of the program, no cassette operations are essential to produce executable machine code in memory.

 $\begin{array}{c} ASMPA\ C8\ \pounds25 + VA\ T \\ ASMPA\ C16/32\ \pounds28 + VA\ T \\ AUTOLOAD\ \pounds6 + VA\ T \\ AUTOSTRING\ \pounds5 + VA\ T \\ MEMFIX \qquad \pounds8 + VA\ T \end{array}$

JCL SOFTWARE EPROM PROGRAMMER

This design of EPROM programmer is specifically designed to operate with the PET range of Micro-computers. It allows the PET to be used as a development system, using the popular JCL Software 'ASMPAC'orComrnodore Assemblers, to produce object code files, which are then read directly from disk or cassette to create 'plug in' software using the EPROM PROGRAMMER.

Embodying all the features needed by the program developer wishing to use EPROMs of the 2516, 2716, 2532 and 2732 variety, it effects data transfer via the USER Port, thus allowing full and un-restricted use of Cassettes and Disk Drives.



Comprehensive disk based software includes Menu driven programs for control of the Programmer and a Data/Instruction program. (Cassette versions to order.)

Specification in brief:

Regulated and fused power supplies to ensure switch free and safe operation from the PET

Industry standard 24 pin zero insertion force TEXTOOL socket on front panel. Fully cased and free standing or, optionally

- Fully cased and free standing or, optionally mounted in PET between VDU and main chassis.
- Software allows PET's RAM to be loaded, from a master EPROM, from Binary Files recorded by the Monitor, or from object code files.
- TRANSFER, PROGRAM, VERIFY and EMPTY commands for quick copying of EPROM,.

'Uncrasher' buttons for use during program development.

Access to PET Monitor and return to Menu, facilitating single byte modifications to PET's RAM content prior to programming.

Mk.II version described for 16/32k PETS and 8032 £250+VA T Mk. I version for 2716/2732 EPROMs only £200 + VA T



G.R. ELECTRONICS LTD.

EPROM PROGRAMMERS

Two separate versions are now offered, one for 2516/2716 and one for 2532/2732 EPROMs. All except the 2732 are compatible with the PET internal ROMs (2332).

'The programmer cards contain all interface circuitry required to read and program +5V 2516/2716 (type 2K) and 2532/2732 (type 4K) EPROMs. Both types plug onto the PET's external edge connectors, using the IEEE port for data, the user port for control Lines and taking power from the external cassette drive. A 24-pin D.I.L. socket is provided on each card to accommodate the EPROM to be programmed or read.

Programmes are now available for both 4000 and 8000 series PETs as well as the 2000/3000 series. Purchasers should specify which machine is to be used

The software routines make use of the PET's keyboard and screen to provide display and editing facilities not available on conventional programmers. This gives considerably greater flexibility in writing and modifying software to be written into EPROM.

A zero insertion force socket and extension cable is available as an option and allows all handling of EPROM devices to be carried out conveniently adjacent to the PET's keyboard. Use of the extension is particulary recommended where numbers of EPROMs are to the Programmed.

Both Programmers £80 + VAT Extension Lead £35 + VAT Eraser £97 + VAT



AUDIOGENIC

The PETSET mounts on the front of your PET and allows you to get out of crash conditions without destroying BASIC. The PETSET has two buttons to ground diagnostic and reset pins (see CPUCN V2 Issue 4) and an electrical interlock to prevent accidents. The PETSET is supplied with all connectors and instructions and is easily fitted by even the unskilled and most incompetent PET owner.

£16.00 inc. VAT

Calco Software

KRAM

KRAM is short for: Keyed Random Access Method; the package consists of a ROM and a disk containing the KRAM support logic which is in machine code form for loading to the top of RAM, together with derno programs (Mailing lists, etc.) and a 40 page User Manual.

For the system designer using KRAM, a system can be implemented without the need to design explicit file structures; for the programmer, BASIC code is simpler and of the order of 50"b shorter in comparison with existing 2040 random access techniques. For the user, retrieval is fast, reliable and maximum use is made of the available disk space (vis. variable record length, external keys option, tree-structured index invisible to the programmer). Conversion of existing systems using relative-record file access is straightforward, requiring merely the use of a numeric sequence of key values. Over 3000 units now in world-wide use.

Ancillaries

MITRELYNN

ACOUSTIC COVER FOR THE COMMODORE PET

The acoustic cover is designed for applications where the Commodore printer is used in a noise sensitive environment. It will reduce the noise of the unit by over 80%.

The cover and base are manufactured in a tough fire resistant ABS plastic, having an attractive leather grain finish. The interior of the cover is lined with an unfaced selfextinguishing polyurethane foam to get maximum noise absorbency.



Aquatech Composite Materials Itd.

THE CROMPTON COMPUTER DESK

Designed by a PET user to overcome the problems associated with using ordinary office furniture, the Crompton Computer Desk is a sensibly priced unit delivered to you flatpacked with full instructions for easy assembly.

The desk top is made in sound and vibration absorbent material with simulated leather finish. There is provision for any normal combination of Commodore PET equipment, and paper feed and take-up trays are included as standard. Mounted on castors, the whole unit is fully mobile, requiring only a single electrical mains connection. Optional extras include an extension top (which can be attached at either end) and an acoustic hood, with transparent window, for the printer.



Dimensions

46" (1158mm) with extension top 48" (1473mm) 22'/." (564mm) 28'/x" (724mm) -- giving keyboard height of 32'/:" (825mm) Length:

Width:

Height:

To accommodate larger printers, a 30" (762mm) width unit is available. A matching desk version is also available with Of without

L149 + VAT

1 D Q DATA AUTOMATIONS LED

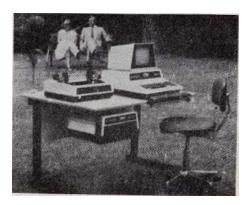
FURNITURE

A range of ergonomically custom-designed Workstations and Printer Desks made by Gutmann, the acknowledged leader in this field, is now available to PET users through Commodore Dealers.

All stations feature tops in hard melamine, selected for its wear resistence and heat conductive characteristics. Edges are rounded and trimmed with protective, colour co-ordinated vinyl, further increasing work comfort and reducing risk of injuries and damage.

The ECONO line is available in rosewood, light oak, walnut, pearl white, time green and curry decors with brown steel frame. The DATANORM models are being delivered in pearl white with charcoal steel frames.

All furniture comes in standard widths of 60, 80, 115 and 160cms.



£ 125 + VA T

Accessories

- 1. Diskette Easel Binder for up to 180 diskettes. Binders £7.00 (capacity 18 plates) + £1.80 per plate (capacity 12 diskettes).
- 2. Flip Sorter (FS-05) Diskette protection plus filing system (capacity 60 diskettes) £ 17.50.
- 3. Copy Holders-many models. I roin (36.00.
- Continuous Forinstand Trolley with removable paperbaskets. £84.00.

Sumiock Manchester

DUST COVERS

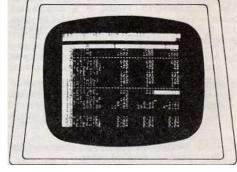
A complete set of attractive dust covers for the whole Commodore range, ideal for protecting the equipment in an environment where airborne dust can cause a problem.

PET dust cover £6.50 + VAT Floppy disk dust cover £4 + VAT Printer dust cover £4 + VAT

VisiCalc



Applied Computer Techniques Limited



VisiCalc was born out of the observation that many problems are commonly solved with a calculator. a pencil and a sheet of paper - three nearly universal tools. Calculating sales projections, income taxes, financial ratios, your personal budget, engineering changes. cost estimates even balancing your checkbook is done with a calculator, pencil and paper.

VisiCalc combines the convenience and of a pocket calculator with the memory and electronic screen familiarity powerful. capabilities of the personal computer. With VisiCalc, the computer's screen becomes a "window" which looks upon a much larger "electronic sheet". You can move, or "scroll", this window in all four directions to look at any part of (he sheet, or you can split the computer screen into two "windows" to see any two parts of the sheet at the same time.

The sheet is organised as a grid of columns and rows. The intersecting lines of the columns and rows define thousands of entry positions. At each position you can enter an alphabetic title, a number or a formula to be calculated. Just by "writing" on the sheet, you can set up your o%% n charts, tables and records. Formatting commands let you individualise the appeal ance of each entry, row or column.

But, the power of VisiCalc is that the computer remembers the formulas and calculations you use as you work through a problem. If you change a number you had previously written on the electronic sheet, all other related numbers on the sheet change before your eyes, VisiCalc automatically re-calculates all of the relevant formulas.

Re-calculation makes VisiCalc a powerful planning and forecasting tool. Not only can you effortlessly correct mistakes and omissions. you can also examine various alternatives.

VisiCalc's editing features let you change, insert or delete titles, numbers or formulas. The existing VisiCalc chart or table is instantly restructured, with all of the columns, rows and other formulas edited to reflect your changes.

Once you've established the format for a particular application, you just enter or change numbers. You can save the entire electronic sheet on your diskette, and you can print all or part of the sheet on a printer.

You can learn the elementary features of VisiCalc in an hour or two, and youll find that you are immediately able to solve simple problems. As you use VisiCalc for more complicated applications, you'll discover that it has a broad range of features and commands. You learn these features and commands as the need arises.



Brand New

DRL PET Communications

The DRL PET Communications allows a 32k PET to be used as an interactive video attached to main frames using communications protocols varying from simple asynchronous to complex synchronous modes. The current implementation follows ICL protocol standard ICLCOI and CO2

The system consists of a Communications Control Box and a comprehensive software package which controls both the PET and the Box when running communications applications

The Box consists of a full micro-processor board with 16-48k bytes RAM and up to 4k bytes ROM, a fully programmable USART and an RS232C interface for direct connection to a modem. Since the Box uses the User Port the IEEE port is available for disk and printer transfers.

£995 + VA T

Cytek

MULTIFONT

The Multifont is a hardware device which plugs into the socket occupied by the current character generator. The user can then select between four character sets. Multifont has been designed to work with WORDCRAFT 80 and a Qume daisywheel. For a secretary who has to type documents with scientific, legal, mathematical or foreign symbols, Multifont provides a real character, for example a pound sign, on the screen which is far easier to read than a PET graphic character. Cytek can provide most of the common daisywheel character sets for the Qume in specific 4 set combinations and for extra cost can put together tailor made sets for any of the large range of daisywheel faces for the Oume.

 $\pounds 172 + VAT$



MULTIFONT

a, B, 11

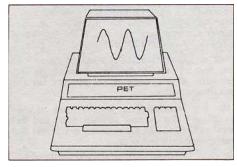
QUME

Radar

THE RADAN-TEKTRONIX PLOTTING SYSTEM

The system comprises of a 15" x 10" plotter, tutorial disk, BASIC plotting routines and a detailed instruction manual. It enables the user to produce graphs and drawings from the PET or to digitise information from pen traces, photographs and drawing for storage in the PET.

£2,525+ VAT



BHRA

TECPAC

A range of scientific and engineering software from the Technical Software Centre which is being jointly sponsored by the British Ilydre Mechanical Research Association and the National Research Co-operation.

The first releases are expected in Spring 1981. The software to be released is for applications for fluid statistical analysis of data, structural analysis, control theory and design office software

Cortex

INTERCOMM

I NTERCOMM is a general purpose asynchronous communications package for the PET using an RS232 (V24) interface. INTERCOMM will send and receive files using all standard CBM peripherals and ASCII printers.

INTERCOMM provides a user transparent interface, no specialist programming is required. All host handshaking and terminal protocols are supposted internally. This has been achieved by development of aconfigurator which enables INTERCOMM to be structured to the exact requirements of the link.

 $\pounds\text{-}350 + VAT$

iJ Design Ltd.

Hi-Resolution graphics board for 80 column PET! KEYWORD software. Available in March 1981.

£350+ VAT

THE BANKER RAM/ROM I/O BOARD

The Banker is a 32k low power dynamic RAM board individually addressable in 4k blocks. There are 4 ROM sockets giving up to 16k of ROM and 4 parallel 1/O ports using the 6522 VIA. Also included is a 5V EPROM programmer for 2716 and 2732 chips.

Two kinds of bank switching are supported extending the RAM/ROM of the PET well beyond its 32k limit. The memory is addressable in 4k blocks (8 in total) and an enable register determins which block will be accessed. Hardwired jumpers select which bank is going to be used when the PET is reset. The Banker has an 18 bit addressing capability, thus enabling it to be used with any future expansion of the 6502 address bus.

STALLY APPL

COMMODORE PET USERS CLUB

The PET Users Club was founded in order to provide news, ideas, applications and programs relating to the PET and to act as an information exchange between Commodore and PET users and amongst PET users themselves. Approximately 8 times a year we send out the Commodore PET Users Club Newsletter to all our members, This contains product news, hints and tips on programming and details of PET compatible hardware and software available from other manufacturers.

Many of our program authors are members and use the programming hints published in the Users Club Newsletter to "tune" their programs to provide maximum performance. For first time PET Users, reading the newsletter is one of the best ways of mastering the powerful capabilities of the PET. Other members are users of PETS owned by companies, Schools and Colleges. Quite a few people "just thinking" about buying a PET join too.

Free entry to the Commodore PET Show, the most important event in the PET calendar where all the latest PET related Hardware and Software developments can be seen under one roof. User Club members also automatically receive the latest Commodore catalogues.

Details of problems encountered and solved by other users are one of the chief benefits of being a User Club member. In order to encourage bashful writers the Commodore PET Users Club offer a "reward" of a £50 voucher (exchangeable for any Commodore Product) to the author of the best applications article or program published in CPUCN. In addition all articles published are eligible for entry in the competition "Best of the Year" with a £250 Commodore Voucher as the prize.

SPECIAL OFFER TO NEW PET OWNERS!

As a special incentive to new PET owners the membership fee has been reduced to only £7.50 for UK membership and 1:12.50 for overseas membership, but you have to send us a photocopy of your purchase invoice and it must be received by us within 30 days of purchase.

Send your cheque to:

CPUCN Subscriptions, Commodore Business Machines, 818, Leigh Road, Slough, Berkshire.

MEMBERSHIP FORM

Name	 	••••	 • • •	
Address	 		 	

l enclose a cheque to cover the following items:

Membership fee (UK) £10.00 Membership fee (Overseas) 85.00

l enclose a cheque and a copy of my purchase invoice thus claiming my .£5.00 discount to cover the following items:-

Membership fee (UK) C 7-50 Membership fee (Overseas) (12.50

Total enclosed

Some current applications for approved products

IPSWICH GP LEADS FIELD WITH COMPUTER

A major report today urges Britain's family doctors to become computerised, but Ipswich has headed the field for about nine months.

The Royal College of General Practitioners says a computer in every surgery would bring "immense benefits," including better treatment for patients.

It could also lead to the safer prescribing of drugs and a deeper understanding of the patterns of disease within a community.

A working party concludes, "we believe a computer system could, and should he in widespread use in general practice in five years and adopted by virtually all practices in 10 years".

But an Ipswich doctor has beaten the rest of the country to it. He has been using the computer at his town centre practice for the past nine months.

He has developed a programming system specifically for general practitioners, and has been using it to file his patients'symptoms and treatments since last year.

He has 5,0011 patients on the computer index, and shortly plans to increase that to 10,000.

The RCGP, in its report, says the introduction of computers would be of great benefit to the keeping of doctors' records.

It adds, "Medical information handling is no better now than it was at the inception of the National Health Service and while it has not been shown that good clinical records improve care, it has shown that bad care is often associated with bad records".

The Ipswich doctor said, "We have been putting into practice here for about nine months exactly what they are proposing. I have found it of great value".

The above system is now available from MEDICOM, Commodore's officially approved medical software company.

COMPUTER DATING ON A PET

Andrew Taylor uses a 32K PET to handle all the administration, accounts and membership records of a club running dinner dances and weekend house parties for mature Londoners. After investigating several database management systems he chose Conipsoft's DMS | Data Management System) for simplicity of operation

Before each meeting of the club DMS searches for, then prints a list of current members, together with a list of all prospective members who have an invitation for that specific evening. This list is printed in four sections of male and female members and current and prospective members. Club subscription includes VAT and a payment to two different clubs for the facilities they accord members. DMS calculates the VAT portion of all the memberships paid, adds it all up and produces the amount payable.

Using DMS has meant a vast reduction in the administration of the club as an opportunity to produce some real management information. Now that DMS is linked to a PET wordprocessing package, Andrew can write to selected members whenever he needs to tell members who were interested in seeing a particular play, what date the group meeting has been arranged for, etc-

Yet another example of PETs and DMS making life simple!

PET CONTROLS GREENHOUSES

An expert in hydroponic horticulture is using a PET, together with interfaces from 3D Digital Design & Development, to monitor and control the environment in greenhouses.

The work is being done at Wye College, the agricultural research college of London University, with the aim of increasing the yield of such crops as tomatoes, lettuces, cucumbers etc. The plants are grown without soil, but with a liquid nutrient solution continuously flowing past their roots. Signals from thermometers, wind gauges, solarincter and humidity sensors are read into the PET via a mufti-channel Analog-to-Digital convertor, and by using a 16-channel Relay Control Unit, the program can open or close ventilator flaps, turn on fans or heaters.

A sophisticated and versatile program has been written to ensure that the optimum environmental regime is maintained for both day and night conditions, with a screen display of current status of all relevant variables and parameters, an alarm setpoint capability, and a manual override facility.

All the programmed input and output is over the IEEE-488 bus using simple PRINT and GET commands, and fit c interfaces are simultaneously connected on the bus with a CBM printer to provide daily hard-copy reports.

The work is now at a sufficiently advanced stage for the system to he offered to growers on a commercial basis, with 3D Digital's hardware and Wye College's horticultural expertise combining to produce an impressive technical advance in this area.

NEW PET INTERFACE USED FOR AUTOMATION

The latest ICI GammaTrol product is a Universal Interface System for the PET. The applications of this versatile boa are as limitless as the ingenuity of the user.

The tasks for which ICI GammaTrol Interfaces are currently being used range from the control of a critical crystallisation process on a large chemical plant, to use as a teaching aid at Loughborough University. One popular field of application is the collection and analysis of data from laboratory instruments, and the control of experiments. ICI GammaTrol equipment has been successfully used for the automation of a viscosity measurement system, and for linking chromatographs to the PET.

The prime advantage of the ICI GammaTrol system is the ease with which the user may select a combination of input and output options which exactly match his requirements. The analogue and digital options chosen may be expanded at a later date by adding more from a comprehensive range of plug-in boards.

Dealer Stamp:

