Connecting your front line

Business in the 1990s - from the shop floor to the showroom - requires flexible and portable data management tools. One of the major business challenges of the 90s is to ensure that the large percentage of the work force who are 'mobile' are able to communicate regularly, and accurately with head office. With the launch of the new Psion HC Range of hand held computers, Psion has taken another major step in enabling this to happen.

The HC Range has been designed to meet any application requirement, and to be integrated with any existing computer system. This combined with the highly configurable hardware, from plug-in 2 megabyte sized Solid State Disks to expansion modules for peripheral devices, creates a completely OPEN SYSTEM, which can be designed to meet any company's requirements. This open and flexible system represents an entirely new approach to computing in the field.

Through the use of modern software techniques, Psion has developed a powerful Multitasking Operating System that is unique amongst hand held computers. Software development for the HC, is provided by the two PC based systems; one utilising standard 'C', familiar to developers worldwide, and the other Psion's proprietary OPL/g language, based on OPL, familiar to existing Psion developers.

As a unit, the HC is physically tough, splashproof, and designed to withstand a one metre fall onto concrete.

Note from the Chairman

> *During the exciting eleven years of its history, Psion has developed a considerable reputation for innovating and pioneering new sectors in the microcomputer industry. Nowhere is this more true than in the hand held sector where, with the Organiser range, the Company has created new markets with a new genre of products worldwide.*
>
> *Hand held computers are now set to expand rapidly in both consumer and corporate markets. Projections by Dataquest forecast extraordinary growth of 90% per annum in volume terms over the next five years in the corporate sector. With a market base of nearly 3/4 million units and a market share in volume of some 20%, Psion is in a prime position to expand our leading role in this fastest-growing sector of portable computers.*
>
> *1991 sees the introduction of two major product families by Psion to meet these market requirements. The first of these is the new HC range of corporate hand held comuters.*
>
> *In modern commerce and industry more than half the operations of a typical business take place outside the office. This is the "frontline" of the business with sales personnel, delivery staff, warehousing, field service, market research, production and many other areas of operation. Within the office, the use of computer systems for management information and control is now axiomatic. But the frontline of industry outside the office is the Cinderella, which must now be clothed with modern systems. In five years time the remote on-line terminal will become as commonplace as the desktop or networked PC in the office.*
>
> *We are The Company in Europe offering the capability in hardware, software, peripherals and systems to connect the frontline of your business to its management information systems. The HC has evolved from our wide commercial experience and from many years of development. It is undoubtedly the most versatile and flexible of hand held computers in the world, designed to take advantage of developments in the industry over the next five to seven years.*
>
> *In the Autumn we shall be expanding our range of hand held computers further with Psion Series 3 to address consumer, professional and white collar workers. With these products, the corporate HC range and the outstanding value of the Organiser family, Psion offers the most comprehensive range of solutions in the hand held market.*

Innovation and ev

Who is it for?

Recent statistics show that up to 43 per cent of a company's workforce will be on the road at any time. But how much of their activity is a company aware of on a day-to-day basis? Many companies still operate on weekly reports received from their warehouses, sales force, buyers and inventory managers. But this means they're always operating with last week's information. It also means that the people involved at each stage of those various operations waste lots of time filling in forms and shuffling bits of paper around when they could be doing something more productive.

The HC Range of hand held computers are the perfect solution for: service and maintenance engineers who require computerised job control; warehouse staff and merchandisers who need stock monitoring and movement recording (using bar code scanning); financial advisers; sales personnel and anyone else whose job requires them to move around.

The HC range is designed to allow companies to properly manage its mobile workforce - while providing users with the oppportunity to be both more productive and maintain closer contacts with their offices. And because it is multitasking, it can be downloading data from head office, for example, while the user is still entering data into an electronic "form" which could then be uploaded.

The new HC range: State-of-the-art Technology

The two key watchwords of the HC's design philosophy are flexibility and integration. It has been designed in a modular fashion, so that any imaginable configuration of RAM memory, keyboard, screen, SSDs and peripherals can be specified to meet the users needs.

It also extends Psion's pioneering work in solid state storage technology and provides real 16-bit hardware architecture in a hand held machine. It builds on the tremendous development effort that has gone into the design of peripheral devices for
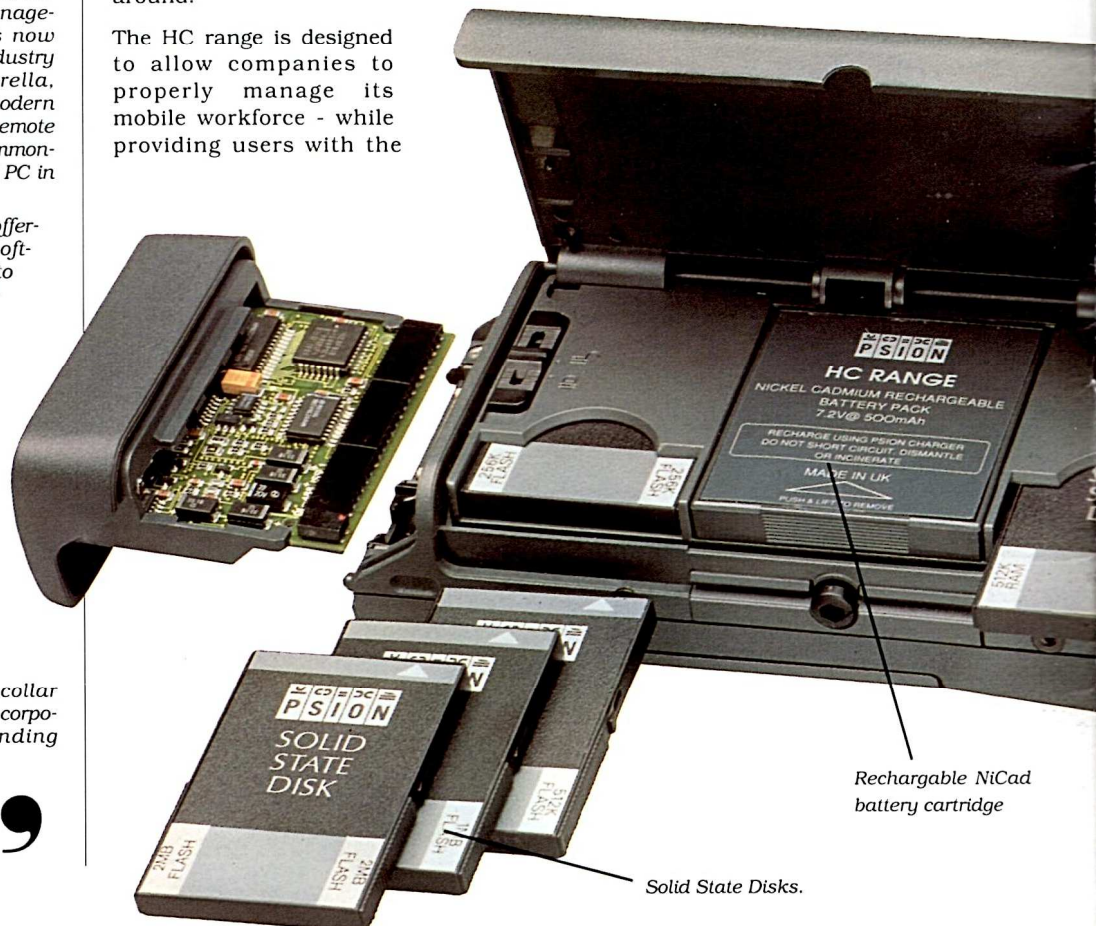
Rechargable NiCad battery cartridge

Solid State Disks.

olution

Psion's existing Mobile Computer range. This means that from the day of its launch, Psion can offer a broad range of peripheral products.
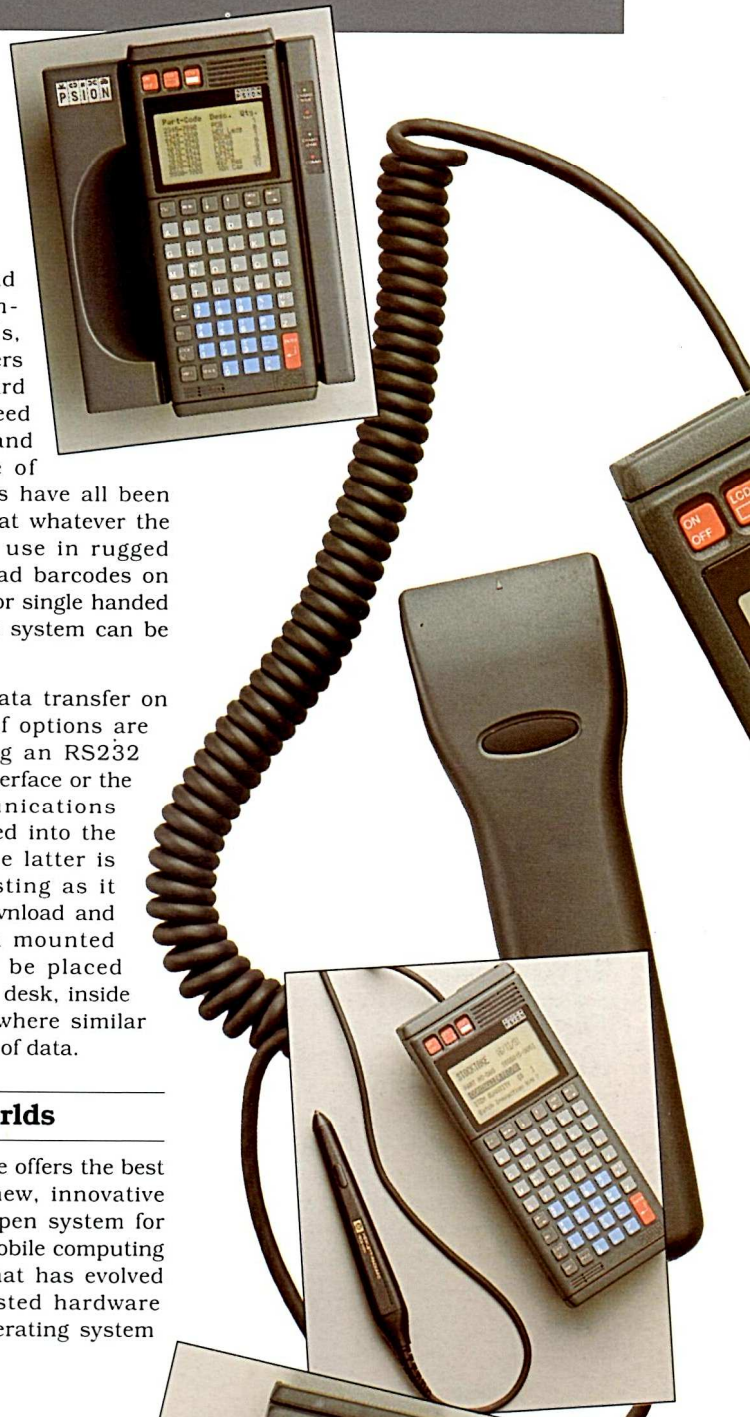
So what's in it?

The HC Range offers:-

■ An industry standard 16-bit 80C86 processor

■ A 160 x 80 dot graphics screen providing full graphic capabilities and up to 33 characters by 9 lines, with a wide viewing angle and high contrast. A switchable backlit option is available for poor lighting conditions.

■ Interchangable keyboards, including European, Scandinavian and numeric only variants.

■ Up to 256K of internal RAM memory.

■ Two internal Solid State Drives, each currently able to hold "flash memory" SSDs of up to 2 Mb each in capacity.

■ Two expansion slots for peripheral devices - as well as a high speed communications interface.

Expanding the system

The expansion modules which fit flush inside the

HC include laser and CCD barcode scanners, barcode wands, magnetic card readers and a Quad standard modem for high speed data transmission and receipt. The range of wands and scanners have all been chosen to ensure that whatever the requirements - for use in rugged environments, to read barcodes on curved surfaces, or for single handed operation - the right system can be supplied.

When it comes to data transfer on the HC a number of options are available, including an RS232 serial and parallel interface or the high speed communications interface incorporated into the side of the HC. The latter is particularly interesting as it allows the HC to download and upload data from a mounted "cradle" which can be placed inside a vehicle, on a desk, inside a warehouse or anywhere similar for the quick transfer of data.

Best of both worlds

In short, the HC range offers the best of both worlds - a new, innovative and vastly flexible open system for the development of mobile computing solutions, yet one that has evolved from proven and tested hardware and multitasking operating system technologies.

HC with cradle

HC and Hewlett Packard barcode wand.

Expansion modules fit flush inside the Psion HC

HC with optional numeric keyboard.

Making Comms Mobile

Portable computing has evolved dramatically over the past few years, but there is one key area that has often lagged behind: communication. Most mobile systems have in the past, provided PC data communication facilities that were limited to communication by a single portable computer to a single PC - often via direct serial connection.

While these facilities were useful, they were not the solution to comprehensive data communication for the mobile workforce. The answer is the Psion Communication Server (PCS) which offers advanced data communication facilities in a system that supports up to 16 simultaneous error-correcting connections from anywhere in the field via a modem to a central location.

By using PCS in conjunction with any of Psion's hand held or mobile computers, field workers are no longer restricted to returning to base before downloading or receiving data.

The Server runs on an IBM AT or compatible using MS-DOS. The Server itself can be either a network station or stand alone PC. It is also highly flexible in how it is configured, including password protection. The PC can run unattended, but for reasons of both efficiency and security, you can set it to start running or close down at pre-determined times to take advantage of off peak phone rates.

In addition, all the elements required to produce MC or HC Server based applications are supplied with the PCS. These include full development documentation as well as data communication routines using OPL.

Finally, you can see at a glance how effectively your communications system is operating through a graphical tool. This analyses number of line failures, volume of throughput, types of data errors, connection times and the length of calls.

Who benefits from PCS?

The Server is the ideal solution to mobile communications for any corporation with a sizeable mobile workforce who need to communicate regularly with their base. This may be a sales forces who are using mobile equipment to download information on new sales leads, or field service engineers obtaining work schedules.

In the case of Unigate Chilled Distribution it is the need to speed up the delivery of chilled foods between their warehouse and the individual stores that has resulted in the first use of the PCS.
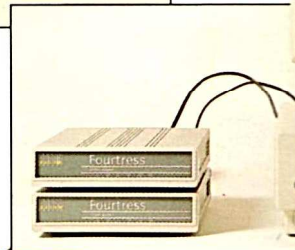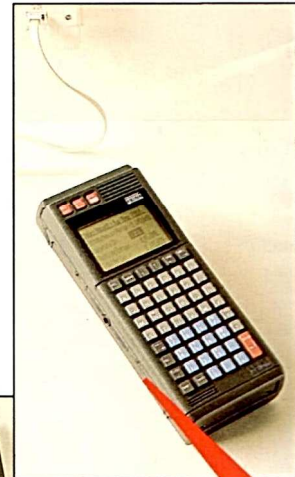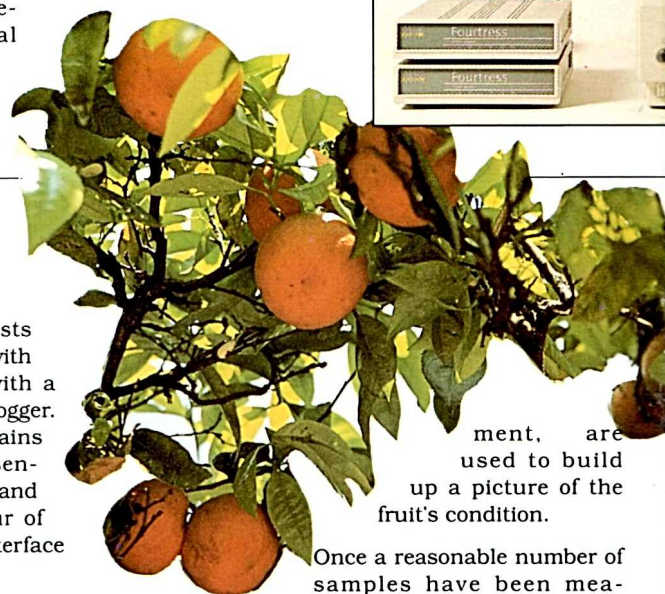
Being fruitful and multiplying

Remember that man who said yes when the fruit was ready for picking? Chances are that these days he might be carrying an Organiser II with him.

A West Sussex company has developed a way to help fruit growers with the job of inspecting fruit and increasing quality through the design of an interface and specialised software for the Organiser POS200. The complete system is known as "Handi-Grade" and, according to its developers, is designed to offer electronic quality control for the horticultural industry.

The system works by defining shape and colour variation in the samples measured. Handi-Grade consists of a small hand held unit with a sliding stage together with a POS200 to act as a data logger. The body of the unit contains electronic circuitry and sensors to determine the size (and thus the grade) and colour of the fruit - as well as the interface to the Organiser.

When a fruit is placed in the sliding stage of the Handi-Grade, light is reflected off the surface of it and its intensity is recorded as a number on the Organiser II and can then be used for analysis. Various colours are measured and, together with the diameter measure-

ment, are used to build up a picture of the fruit's condition.

Once a reasonable number of samples have been measured, the Organiser is connected to a PC and the data downloaded for graphical analysis. The graphic output can help the grower determine the most suitable time for harvesting a crop as well as monitoring fruit that is being held in storage.

Improving Freshness

The freshness and quality of prepared foods is an issue that has been rarely out of the news over the past couple of years. As a result, both food manufacturers and supermarket chains are feeling a strong demand by the general public for constant improvements to the way food is shipped, stored and presented.

In the chilled foods industry, this has been a particularly pressing challenge. Unigate Chilled Distribution has taken an innovative approach to the issue and in conjunction with one of its major customers, CRS (Co-operative Retail Services Limited) entered into a joint development programme which has reduced the time taken to process chilled foods orders from 72 to 48 hours.

In that time, UCD takes delivery of the goods from numerous producers, sorts out which products are to go to which supermarket outlets and then sends refrigerated vehicles out to make the deliveries.

UCD has achieved this goal within three months through the use of a new stock order entry system based on Psion P350 hand held computers, Psion Dacom 2123 modems, the Psion Communication Server and portable printers.

It is a marked change from the way things had been done, UCD used to take orders from each Co-op outlet by telephone operators, using an optical mark recognition (OMR) sheet. This process was slow and prone to errors. Orders had to be fed into an OMR "reader" in batches. and the resulting data transferred to the depots mini computer system.

The system now starts operating at the individual supermarket level. Instead of each store checking all stock and then manually entering orders in an order book every two days, store staff now use the Psion P350 and a bar code reader to check quantities of existing stock and then enter, edit and review the new orders on the hand held. Once the store is happy with the order, it can then transmit that order to UCD depots using the Psion Dacom 2123 modem.

At the depots, the Server software on the PC receives data and, at predetermined times, closes down to all incoming orders and establishes a link with the company's Datapoint order-processing mini computer system and uploads the data.

To rationalise the data transmission process, each store is given a time slot when it is to send its data to the UCD depot. The Communication Server is preprogrammed with this information. The P350 also includes everything needed to initiate and conduct this data transmission.

Data is compressed in order to make the number of transactions quick and effective, particularly given the number of products and volume of data involved.

From there, orders are processed much as before. But by improving the speed and accuracy of the front end of the system, UCD has been able to save time, money and improve the quality of service offered to its customers.
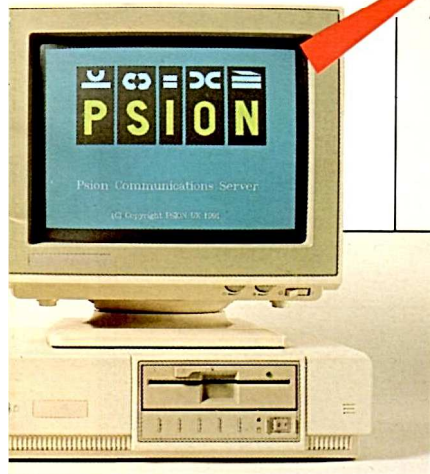
Serving customers the Psion way

Organiser - The farmers' friend

For centuries, agriculture in Malaysia has been associated with old-style plantations that grew crops such as rubber, oil palm and cocoa.

Major efforts are being made now, however, to both modernise the country's existing agricultural base and bring in new agricultural forms, such as prawn farming.

Psion's Malaysian distributor Advanced Personal Computer and software developers Vision Soft Centre, as part of this modernisation process, have developed Organiser systems to revolutionise the way crops are managed - and plantation workers paid.

The formulae required to calculate crop yields on plantations are quite complex and previously calculations could only be made weekly or monthly. Using Organisers in the field, yields can be calculated daily and downloaded to a central database for maintenance of year-to-date yield records.

Meanwhile, the systems are also being used to keep track of which insect, weed and disease controls work best when used on the crops - and how field results compare with agronic and laboratory trials.

In addition, Organisers have helped improve industrial relations as payments due to plantation workers based on piece rates can be calculated at the weighing station. By entering an employee code into the Organiser at the time of weighing - along with the weight of goods picked that day - it is quick, simple and accurate to figure out the payment due.

Malaysia is also home to a growing aquaculture prawn farming industry. This, however, requires very careful monitoring of a wide range of environmental conditions - including the salinity of the water, its PH balance, the concentration of $CaCO_3$, dissolved oxygen and the turbidity of the water.

Until recently, maintaining this fine balance was difficult as prawn farms tend to be in remote areas. The procedure generally used is to take a water sample, record the findings, go back to a local base station and use a personal computer to calculate any adjustments that need to be made to the water, and finally go back to the prawn farm to make the adjustments.

A number of prawn farms are now testing Organiser II systems. Once water samples are taken at the prawn farm, Organisers are used on-site to allow immediate adjustments to be made to the water in the prawn ponds. This provides instant feedback on the condition of the ponds and ensures that an optimal environment for prawns is maintained.

Fresh air and hot cars

Chile is a country facing great change and progress. Over the past 18 months, it has moved from a military to civilian government - while at the same time facing many of the global issues of air quality and pollution control.

In its efforts to become a more green nation and combat the serious traffic congestion problems facing the capital Santiago, the Chilean government has taken stern anti-pollution legislative measures. Santiago is clogged with no less than 13,000 buses and 25,000 taxis to serve its 4 million inhabitants.

A number of these vehicles are old, poorly-serviced and come nowhere near meeting the new pollution control guidelines. As a first step, the government has introduced a system that forces all vehicles used in public transportation to be submitted for quarterly technical reviews of their exhaust emissions. In addition, it has banned buses 18 years and older from being driven on Santiago streets.

The results of these reviews - along with a list of banned, pre-1973 buses - are stored on a central computer database and downloaded to Psion Organisers. Pollution control inspectors then carry these Organisers with them as they patrol the city's roads. When they spot a suspect bus, they key in the licence plate number of the bus and check when it had its last

A second Russian revolution

The Soviet Union is undergoing a second industrial revolution. As it opens up to foreign investment and private enterprise increasingly becomes the order of the day, modern Western production methods are allowing Soviet industry to leapfrog into the 21st century.

In Western Siberia, for example, a Soviet joint venture with French and Italian firms has implemented a new, automated tyre manufacturing system at the Omskshina tyre factory with Psion Organisers playing a key role in the quality control process.

Until recently, any faults in the manufacture of the tyres were not detected until six hours after the shift which had produced those tyres had booked off - making it difficult to detect the cause of the problem and causing vast amounts of wastage as the new shift would continue to produce defective tyres until the faults were found. The factory was experiencing some 20 common manufacturing problems including punctured or dented tyres and thin rubber.

To battle this problem, a new system of fault diagnosis has been developed with Organisers at its heart. Quality inspectors now carry out their work - using Organisers to log the results of their investigations - during each of the four shifts worked at this 24 hour factory.

At the end of each shift, data is downloaded from all Organisers to a PC and a quality control report can be generated almost immediately, offering quality inspectors the opportunity to diagnose and correct manufacturing faults more quickly and effectively.

Cossacks Cathedral, Omsk, Siberia.

inspection, what the results of that inspection were and whether or not the bus is allowed to be on the streets.

The system has been so successful that Chile's police department have developed a similar system to track stolen vehicles. Police carry an Organiser with a Datapak containing details of all stolen cars. In order to prevent any confusion, this database is updated daily, so that all a police officer has to do is key in the license plate number of the suspect car and within a few seconds will know whether or not it is stolen. It also warns the officer as to the attitude the driver might take toward him.

Keeping a finger on the pulse

Heart disease is one of the world's most pressing health problems and - despite an increasing awareness of the importance of a healthy diet and excercise - continues to require bold and innovative treatment to combat it.

Merck, a leading German pharmaceutical firm, has been conducting follow-up research on Concor, a Betablock drug that it has developed to battle both high blood pressure and heart disease. As part of this work, it recently commissioned Ashton & Aschenfeld Software Ges. m.b.H to develop a data collection system.

The aim was to record information about the effects of Concor on a wide group of patients, particularly those with a stable condition of Angina Pectoris that experience between 1 and 20 attacks a week and who are between the ages of 35 and 70.

To achieve this, several hundred doctors throughout Austria and Germany were supplied with Organiser systems. Each doctor collected details such as medical history, stability and other key data from up to 15 patients and stored the data on Datapaks.

These Datapaks were then sent to Vienna where Ashton and Aschenfeld conducted the necessary statistical analysis on the data. Under the terms of a conventional drug study, doctors would be required to fill out extensive hand-written questionaires. Now, doctors only need to enter data in the Organiser II and then send it off making data much more quickly available.

MERCK

Fuelling the smog

From stock control to pest control

Developers have been busy linking Organiser systems to bar code readers to develop a wide range of innovative applications that are used for everything from stock control to pest control.

Stock control

For example, Caldor Inc. - a large retailer with dozens of outlets through the Eastern United States - has vastly increased the flexibility and productivity of its inventory control and order entry process using Psion Organiser II systems connected to bar code readers. Each day, staff survey the stores' shelves and determine which products need to be reordered and the quantities of each order.

Once this information is compiled, Organisers are used to scan vendor product bar codes. At day's end, this order information is transmitted via modem to Caldor's headquarters where purchase orders are processed.

Pest control

Meanwhile, in Florida, Organisers fight the battle of the bug. The bug in this case is the mosquito. They are never popular creatures, but in the warm and humid climes of Florida they are a clear and present danger to the health of local residents.

To help curb the mosquito problem Adapco of Winter Park, Florida has developed a mosquito control system built around the Organiser II. It all starts when the pest control organisations in each of the respective counties set barcoded mosquito traps throughout their regions.

These attract the mosquitos with a barely audible tone and then hold them in dry ice in the trap. The number of mosquitos caught are monitored at irregular intervals, depending on weather conditions. In hot, dry weather they are checked less regularly as mosquitos are less of a problem than in warm, humid conditions.

Upon inspection, the barcode at the trap is swiped to log the trap number on the Organiser's pest control database. The inspector then manually keys in data about the number, gender and species of captured mosquitos.

The Organiser is also being used at ponds, drainage ditches and lakes where water samples are collected. The number of mosquito larvae per sample is recorded along with the place where the larvae were found. This data is then uploaded to a mainframe by modem, where it is then used to plan and implement pest control programmes for the region.

Stocking the pharmacy

Australia is a vast nation and one that poses considerable challenges for any company that needs to quickly and efficiently distribute its products nationwide. F.H. Fauldings Wholesale Pty Ltd, Australia's largest pharmaceutical wholesaler, has met this challenge by developing an on-line ordering system that is now used by more than 1500 pharmacists .

Faulding had been looking for a viable alternative to its 10 year old wholesale ordering system and finally decided on the Psion Organiser II for which they developed their own Portable Data Entry software.

The Organiser was seen as ideal, because of its two way communication capabilities, low cost and built in features.

Now, a pharmacist can order goods by either keying in an order number directly to the Organiser, or by using a barcode reader. The unit then transmits the order to Faulding's main frame via a dial up modem, where the order is then processed. If the item is unavailable, that information is immediately transmitted back to the ordering pharmacist's Organiser. This is a decided advantage over the old system, where out of stock information was unavailable.

"Use of this system has boosted orders from participating pharmacists by up to fifty percent," said Doug Tilley, Faulding's Customer Service Manager.

Beating the battle of the bugs by barcoding
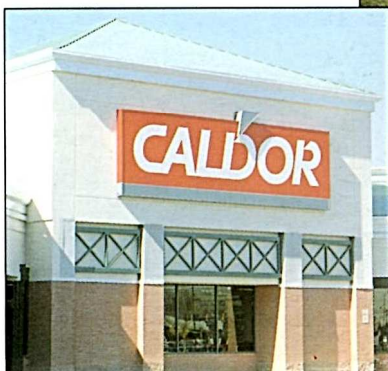
Pro-active not reactive Aid

Psion is a member of the One Per Cent Club, which means that we donate one per cent of our profits to charity. Our chosen charity is ActionAid, the UK's fourth largest development agency.

Our latest report on ActionAid looks at the long-term and realistic nature of its aid programmes as explained to us by ActionAid staff member Terence McCaughan in a recent interview.

Terence, who has just returned from the Samuha project in India, emphasises that aid work isn't all about providing emergency food and medical supplies. Nor is it about imposing Western standards and ideas on citizens of the so-called "third world".

Action Aid programmes are developed in conjunction with the people they are designed to help. "The people being helped set the goals - it isn't a case of ActionAid coming from outside and imposing goals on them," he explains. "Issues such as provision of education and access to clean drinking water are often paramount. The real experts on poverty are the poor themselves."

ActionAid usually makes at least a ten year commitment to the communities where it works. "There are no quick fix answers to poverty," says Terence. "And education is not a glamorous or instant solution, it is a vital part of real change. Its effect is simple - a literate farmer can read the instructions on a seed packet, whereas an illiterate one cannot.

Terence says one of the keys to getting and maintaining long-term support from donors lies in being willing to tell them the hard truths that sometimes face aid agencies. "We tell supporters the bad news, as well as the good" he explains.

Over the past couple of years, some of the bad news has included situations where war and civil strife made it impossible to carry on aid work. For those reasons, ActionAid has had to withdraw from Somalia completely and run down its Sudan programme massively.

Despite these difficulties, Terence explains that ActionAid is now working in seventeen countries, helping people build a safe secure future for their children.

In the next issue of Psion News, we look at how Psion's donations are being used for long term development through educational projects in Samuha India, and in Mozambique.
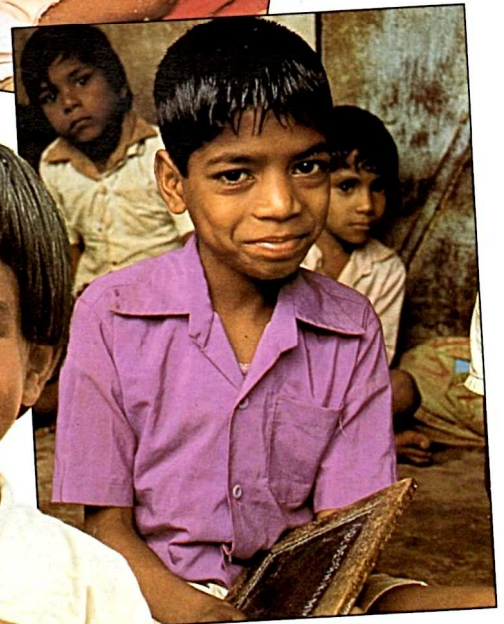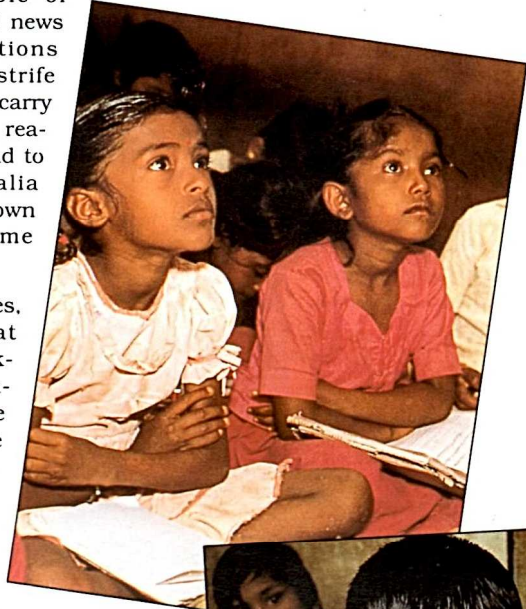
Primary education in Samuha, India.

Datamate, a prime choice for Mobil

The filling station has changed out of all proportion over the past decade. For its first 50 years or more, garages sold oil, petrol and little else.

prime garages limited

These days, however, they have convenience foods, groceries, flowers, music cassettes for the car stereo, snacks (complete with on-site microwave oven to cook them) and car washes in their inventory.

In order to properly manage this hugely-expanded inventory, filling stations have had to implement comprehensive, modern stock control and management systems. At Mobil Oil for example, subsidiary Prime Garages has developed an EPOS (Electronic Point of Sale) system using internal Psion Dacom Unity Gold II modems at each of their stations.

The EPOS system logs all the data on sales which take place each day categorised by cash, credit card, cheque,

debit card and so on. An EPOS till is linked to an IBM PS/2 in the back office. This desktop PC also becomes a complete management system for the filling station, recording hours worked by staff, stock delivered, fuel deliveries and other crucial trade information.

Using the Unity Gold II modem in the PS/2, each EPOS system connects nightly to the mini computer at Prime's head office, sends its trade information and receives any new information on price changes, stock availability and so on.

The system has been up and running at 51 stations on a trial basis since last October and went live in April, along with another 55 that started "parallel running" (i.e. using EPOS alongside the old, manual system for a trial period).

Prime's Sue Morris says she has been delighted with the modems - which were selected for their reliability, and low failure rates.

Nat West insures better communications

Innovation has long been an important part of how banking giant Nat West has sought to keep ahead of its competitors. It was the first bank to introduce on the spot print outs of financial illustrations for customers, using a Psion Organiser based system.

Selling insurance is a tough business - especially in a recessionary climate. It also requires that salespeople have the ability to offer customers fast, accurate and illustrative insurance quotes. Following the success of the Organiser based system within the branches, Nat West wanted a similar system which could be used by its mobile workforce.

That's why Nat West decided to equip its insurance sales force with portable computers, printers and specially-developed modems in a briefcase solution.

While their was no shortage of choice for the computer and printer, the modem needed to be battery operated, lightweight, reliable and operate under optimally high speeds, Psion Dacom's Datamate (sold as Philips Datamate) proved to be the answer. Philips integrated the

hardware to create a rugged, portable and easy to use system.

Nat West wanted a system that downloaded customer data (that may have been derived from a previous mail campaign) via the modem prior to the customer visit.

This would permit the salesperson, upon arrival at the customer's home, to be immediately familiar with their requirements and be ready to discuss them.

At the conclusion of the visit, the salesperson would then use the modem to send a call report directly back to head office where it is immediately logged onto the bank's main system. This is designed to enable faster and more accurate marketing and management reporting.

So far 1000 of these packages have been rolled out to Nat West insurance salespeople all over the country, and another 1000 are set to follow throughout 1991. It should "insure" a bright future for Nat West and its insurance customers.

Flexible faxing with flexible friends

International voice and data communications have come a long way - with digital exchanges being installed in major countries all over the world, fax superseding telex for text messaging and videoconferencing starting to finally take off.

Yet when you want to use a public callbox for anything more than making a simple voice call, the technology on offer is little better than that in a red Victorian callbox.

3C Communications, a pan European communications company, is changing all that. By marrying a Psion Dacom Unity Gold II modem with the traditional public callbox , they have come up with "Credit Card Payfax".

It is aimed at conference centres, hotels, airports and other major business venues that experience a high demand for the use of fax equipment.

To use a Payfax is simple: just swipe the credit card through the Payfax terminal, dial the relevant fax number and press the start button. Upon completion of the transaction the screen indicates the cost of the fax and confirms that the documents have been transmitted. The bill automatically appears on the user's next card statement.

As credit cards become the international method of payment, 3C Communications is taking the same payment idea and applying it to other spheres. And with every installation comes an in-built Psion Dacom card modem.

Making flexible friends

How often, for example, have you been in an art gallery or museum and wanted to donate a little money to show your appreciation of the exhibits and then found yourself with precious little cash in your pocket?

3C reasoned that if you could make your donation by credit card, galleries and museums might find themselves with a little more money. To that end, it recently launched a joint initiative with the Midland Bank to allow the British Museum to collect donations through the use of specially designed credit card donation terminals.

Three terminals all equipped with Psion Dacom modems have been installed at strategic sites throughout the museum - so that visitors who wish to make a donation can swipe a credit, debit or charge card through the card reader attached to the terminal and have the donation billed to their account.

Long day's journey cut shorter

The applications for this technology are almost endless. 3C has, for example, recently developed a system to take the hassle out of paying for your car parking at Gatwick Airport.

How often have you crawled off a long, exhausting flight and then found yourself without the right change to get the exit ticket to leave the airport carpark.

To combat this, 3C have introduced a rapid credit card transaction handling system at Gatwick's South Terminal car park. Just one month after installing the system some fifty per cent of all fees are now paid for by credit card - compared with 30 per cent using the old manual cashier system. Its success is now being duplicated at Stanstead and Heathrow.

3C's answers to the red call box

Organiser Update

Chargepak - rechargable battery pack.

SES Data Systems

SES Data Systems Limited - Following the development of its successful range of ruggedised cases for the Organiser II, SES has now tackled the problem of extending battery life. The company has developed something called "Chargepak" - a slim, lightweight high power rechargeable battery pack that is totally sealed and attaches to the top of the ruggedised unit. The Chargepak boasts a battery capacity around four times that of a single PP3 Nicad battery and SES suggests that it is likely to be particularly popular with heavy duty users of bar code wands and scanners.

SES Data Systems Ltd at Rilmac Building, Kenworthy Road, Stafford ST16 3DY (Tel: 0785 213777).

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XEC, one of Psion's largest value added distributors in the United States, has developed a range of new products for use in bar code work. Bar

XEC

TRANSFORM LTD.   EXTECH INSTRUMENTS

coding is not the easiest of technologies to understand and to assist those starting out in bar coding using the Organiser II, XEC Products distribute a "Getting Started Kit". Developed by Chalfont Technologies Inc, apart from an Organiser and barcode wand, it includes comms link, inventory software for the PC, data collection and transmission software, barcode printing routines, workbooks and other instruction manuals, that help to unravel barcoding.

Other versions of the kit are to be introduced that will specialise in inventory control, sales order entry etc.

But barcoding peripherals are just part of the range of products offered by XEC. Other products include the "DynaPoll - 485 Network" for networking up to 250 Organiser's together with a PC over a distance of up to 10,000 feet, and Dynaport 3, which adds three RS232 ports to the Organiser; both of which were developed by Dynasys Technologies Inc.

XEC Products, 13630 58th Street North, Suite #103, Clearwater, Florida 34620. Tel 813-531-1422.

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BROADOAK COMPUTING   WIDGET SOFTWARE

Kuma Computers Limited has recently added to its growing list of books about the Organiser II with "The Psion Organiser Communications Handbook". It is a technical handbook targetted at people who want to connect their Organisers to external devices such as printers, desktop computers and modems.

Kuma Computers Limited, 12 Horseshoe Park, Pangbourne, Berks. RG8 7JW. Tel (0734) 844335.

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MTS - Brighton-based Machine Tool Services has developed a portable machine tool programming system based around the Organiser II. Dubbed the Psistem, it is designed to store component machining programs prepared on computer workstations

THIRD PARTY LISTING

Consumer Name	Product	Description
BroadOak Computing PO Box 366 London WC2E 9SQ Tel: 071-836-7640	GAMES WORDS	Anagrams, Magic, Nim, Roulette and P Three word games, two crossword gam one like hangman.
Dolphin Maritime Software Ltd Dolphin House Priors Hill Road Aldeburgh Suffolk IP15 5EP Tel: 0728-454 171	SIGHTMASTER 2 SHIP STABILITY	Comprehensive Ocean AstroNavigation Year built in Almanac Comprehensive Merchant Ship Stabili easily customised by user.
LifeScan Clayton Road Mold, Clwyd CH7 1SZ Tel: 0352 55418	LIFESCAN	Health and Fitness Promotion Software.
Mackay Language Software 41 Kensington High Street, London W8 5ED Tel: 071-937-2077	GERMAN PRAKPAK ASTROPAK	Conversational Phrase Book with sentence assembler and number translator. Hand-held astrology. Full calculation of natal chart from time and place of birth.
Pilotage Software Ashleigh, Market Place, Tetney, Grimsby South Humberside DN36 5NN Tel: 0472-814 701	TAFXP/LZ, TIDESXP/LZ	Tidal height computations, using Admiralty method NP159.
Systemslink Ltd Incon House 10 Stilebrook Road Olney Bucks MK46 5LL Tel: 0234-711 220	LEATHER CASE ANGLED DESK STAND	Stylish Leather Datapak and Printer and Coloured Organiser cases. (HC soon). Attractive and practicle angled desk stand for the Organiser II.
Transform Ltd 7c Station Approach, Hayes Kent BR2 7EQ Tel: 081-462 4666	PROGRAM PACK 1	Mail list, World times/ dialling codes and things to do.
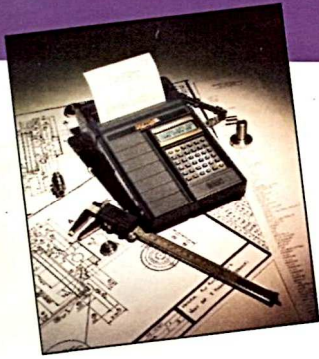
and then *l o a d* them into a machine tool's control system without requirements for costly cabling between programming computer and machine tools.

Tony Bainbridge at Unit 5, Lewes Business Centre, North Street, Lewes BN7 2PE. Tel. (0273) 483292

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DATACAP

Datacap, a Cheshire-based company, produce a range of highly ruggedised hand held computers based on the Organiser II these may be dropped from two metres onto concrete or immersed in water without damage to either processor or case. They have

also developed a complimentary collection of ruggedised peripheral products including a portable printer & radio pen.which can be used with the Organiser.

The printer - known as the DP7000 - uses thermal printing technology to produce high-speed, high-resolution print suitable for bar coding. It is also designed to be able to withstand up to a 1 metre drop onto concrete. It produces both IBM and international character sets in normal, inverted,

double height and/or double width mode as well as bit image or Epson compatible graphics.
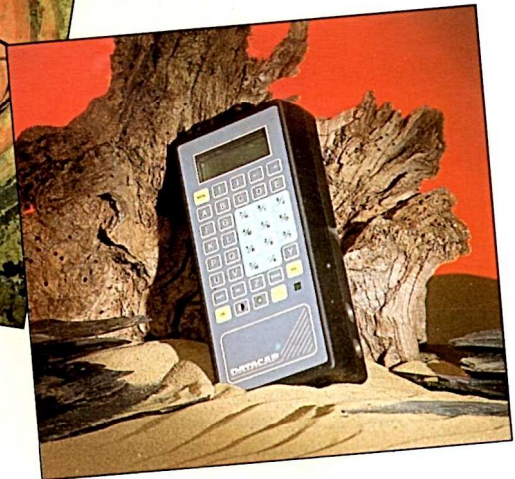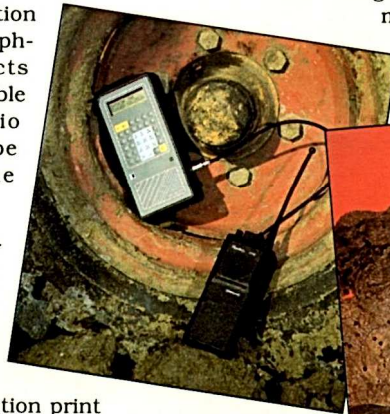
The DCP 5100 pen provides a barcode reading capability in environments where space restrictions or other adverse conditions prohibit the use of conventional wired barcode readers. Similar in appearance to a ballpoint pen, the slim, lightweight transmitter reads data like a barcode reader and then transmits it to a receiver unit plugged into the top of an Organiser. It operates for up to 10 hours and switches off automatically when not in use.

Datacap Limited at Aegean Road, Atlantic Street, Altrincham, Cheshire WA14 5QJ. Tel. (061) 941 1194.

Industry Name	Product	Description
Vectis Programming 16 Hilary Drive Walmley Sutton Coldfield B76 8SW Tel: 021-329 3311	VECTIS PROGRAMMING	Customised software for Psion Computers and Printers.
Synamic Ltd 244 Randolph Avenue London W9 1PF Tel: 071-328 4964	SOFTWARE CONSULTANCY	Advice, consultancy and implementation of hand held systems. Expertise in communications.
Matrix Management Services 4th Floor 62 Buchanan Street Glasgow G1 3JT Tel: 041-221 2398	M.E.D.I.C.	Ward drug data collection. Pharmacy stock analysis and Patient Liability.
On Site 69 Madeira Croft Chapelfields Coventry Warwickshire CV5 8NX Tel: 0203-672 788	ELECTRICAL INSTALLATION	Schedule of rates.
Timeclerk 5 Castle Street Liverpool L2 4SW Tel: 051-231 1934	TIMECLERK II	Task Time recording against client database accepting interruptions on chess clock principle.
Widget Software Limited 121 London Road Knebworth Hertfordshire SG3 6EX Tel: 0438 815 444	FILEMAKER	FileMaker makes it easy to create diaries and files on the PC for transfer to the Organiser.

Psion has been making news around the globe throughout the past six months. Here are just a few samples of the company's more noteworthy achievements. They include a key role for Psion in the modernising of a vintage New Zealand car ralley and MC systems which help police with their enquiries in Australia's remote Northern Territories.

NEWS FROM AROUND THE GLOBE

MC400 goes walkabout

If Crocodile Dundee was around these days, chances are that he would be using an MC400 - particularly as his old mates on the Northern Territory Police Force are now using them.

The Northern Territory was originally patrolled on camels. These days, however, the patrols are carried out by the force's 700 members in four-wheel drive vehicles and aircraft.

Acting Superintendent Marcus Tilbrook is the Officer In Charge in Alice Springs, at the very heart of Australia. Tilbrook and his 17 colleagues cover an area larger than all of Great Britain - but one populated by fewer than 30,000 people.

"We needed a product that could stand up to the harsh conditions of the Australian Outback; it had to be compact, easy to use, inexpensive, have a long battery life, and able to be connected to our PS/2 network," says Tilbrook. "The MC400 met and exceeded this tough criteria; it travels with me in a Pelican air and water-tight case the size of a thick briefcase as the dust in the desert is a real problem for any sort of equipment. In this case I also carry a Kodak Diconix ink-jet printer, chargers, paper and spare batteries. I can draft and print criminal interviews, reports and running sheets a week at a time without ever seeing a power outlet!

The spread of satellite communications in the outback will mean that the Quad and fax modem will also play an important role in remote investigations."
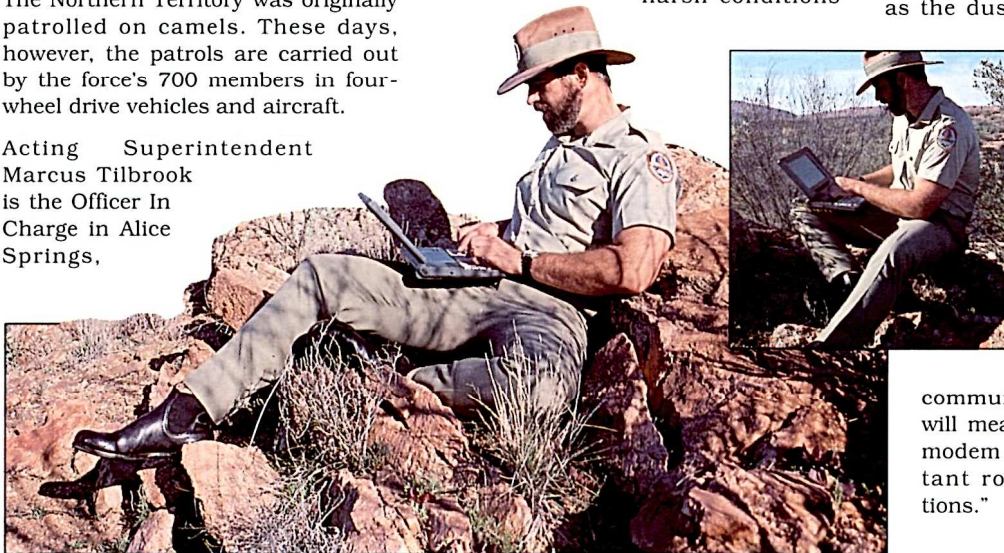
Organiser aids vintage Kiwi cars

Overland car rallies are usually associated with fast cars, unconquerable terrain and rugged explorer-types who equip themselves with every imaginable tool to help them wend their way through an almost impossible route.

But not in New Zealand. This lush and sprawling part of the Antipodes now plays host to an annual car rally with a difference. All the competitors drive vintage cars.

Prospective entrants from overseas - where roads are crowded and restrictions are placed on the use of old vehicles - may find it hard to believe that the Vintage Car Club of New Zealand anticipates some 1000 vehicles to attend made possible by the unqiue attributes of the country which is sparsely populated, yet rich in cultural heritage.

All this is not to say that the rally hasn't got its fair share of 20th century technology to hand. Leatham Electronics, Psion's New Zealand Distributor, is a sponsor of the Vintage Car Club of New Zealand and have provided a number of Organisers - complete with a time-logging program - for the club's second BP Pan Pacific Rally in February 1992.

Supplier of the year 1990.

Mommers Print Service BV, a Dutch PCB manufacturer, has won the Psion Supplier of the Year Award for 1990. Mommers Print Service makes printed circuit boards for Psion's complete range of Organisers and Mobile Computers.

In 1989, Mommers Print Service shipped 500,000 PCBs to Psion with an almost perfect 99.99 per cent reliability rate. Psion's Chairman, Dr David Potter, comments, "Mommers Print Service has always been available whenever we have needed assistance in improving the production, design and quality of our products. Their complete commitment to quality and outstanding delivery performance made them the logical choice for Supplier of the Year Award."

The award scheme was set up by Psion in 1987 to recognise outstanding service from suppliers. It is presented annually to the supplier that provides the most reliable and consistent high quality in product or service and receiving the award means a clear understanding of Psion's demanding quality standards.
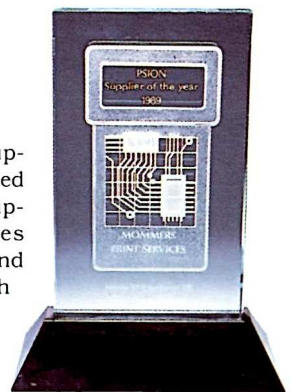
Copying Records

The following two procedures provide the facility to copy records from one file to another on an Organiser.

First, enter the source file name and then when the record you want to copy has been found, press the space key and then enter the target file. Both source and target file must exist and their names must be entered in the format <device>: <filename>

Eg A:ADDRESES

```
reccopy:
LOCAL clue$(8),sfile$(10),r$(1),tfile$(10),f%,k%
start::
TRAP CLOSE
CLS
PRINT "Source file :"
TRAP INPUT sfile$
IF ERR=206
    STOP
ENDIF
OPEN
sfile$,A,a$,b$,c$,d$,e$,f$,g$,h$,i$,j$,k$,l$,m$,n$,o$,p$
DO
  CLS
  PRINT "Find",sfile$
  TRAP INPUT clue$
    IF ERR=206
      GOTO start::
    ENDIF
  DO
    f%=FIND(clue$)
      IF f%=0
        CLS
        PRINT "No more entries"
        GET
        CLOSE
        GOTO start::
      ENDIF
    k%=DISP(-1,"")
    IF K%=32
      copyf:
    ELSEIF K%=1
      BREAK
    ENDIF
    NEXT
  UNTIL EOF
UNTIL 0

copyf:
LOCAL tfile$(10),r$(1)
CLS
PRINT "Target file :"
TRAP INPUT tfile$
IF ERR=206
   RETURN
ENDIF


OPEN
tfile$,B,a$,b$,c$,d$,e$,f$,g$,h$,i$,j$,k$,l$,m$,n$,o$,p$
B.a$=A.a$
B.b$=A.b$
B.c$=A.c$
B.d$=A.d$
B.e$=A.e$
B.f$=A.f$
B.g$=A.g$
B.h$=A.h$
B.i$=A.i$
B.j$=A.j$
B.k$=A.k$
B.l$=A.l$
B.m$=A.m$
B.n$=A.n$
B.o$=A.o$
B.p$=B.p$
USE B
APPEND
CLOSE
```

GY 2877

A choice of development tools

Psion has recognised from the outset that the success of the HC range will depend very largely on the development tools available. To that end, the company is offering a range of software development kits for the HC from day one.

All these solutions are PC-based and will run on even the most basic XT-compatible systems. The most important consideration, however, is that they are standards-based.

High Specification OPL/g

The first is a standard well-known to longtime Psion developers: OPL. This pioneering development language has been used on Psion hardware since the launch of the first Organiser and the HC uses a high-specification of it known as OPL/g.

It is specially designed to allow you to take full advantage of the power of the HC - including its graphics features. This graphics facility is found in few other hand helds and none offer the level of control or simplicity that Psion provides with OPL/g for the HC range.

Standard 'C'

Meanwhile, the wider development community will also find the necessary tools to get moving with HC applications development through the use of standard C. As a key plank in Psion's third party strategy, the availability of C means that developers should be able to quickly port their existing C applications from other platforms and find that they run on the HC with few, if any, changes required.

This implementation of C also supports HC-specific features such as its built in multitasking. This is particularly important, as research suggests that portable computer users often need to move quickly between one task and another - and make use of computing facilities while other activities (such as downloading of data) are also being conducted.

And physically moving data to the HC is not difficult, either. The industry-standard XMODEM communications protocol is built into the HC - as is Psion's own LINK protocol. LINK offers direct access from the HC to remote filing systems on PC-compatible computers, the Apple Macintosh and Unix systems via RS232, modem or high speed serial interface.

Finally, developers can also be assured that communications requirements are adequately catered for through the availability of the Psion Communications Server - which provides for up to 16 error correcting telephone connections to be made at any time between systems in the field and a PC workstation (see page 4 for more details).
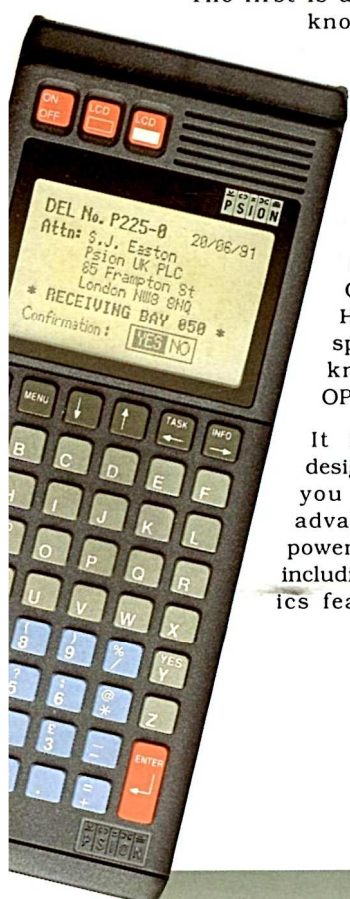
PSION *news* *supplement*

A selection of the latest products and applications produced by Independent Developers for the Psion Organiser II range of products.*

Perfect Printing

Everything we buy be it a carton of orange juice or a ticket to Barbados, is printed with information such as barcodes, sell-by dates, product codes and prices.

Linx Printing Technologies Ltd., specialists in this type of printing selected the Psion Organiser as a compact and easy to operate input and diagnostic tool for their range of continuous ink jet printers.

Linx in conjunction with Psion developed an interface and software to link the Organiser to the ink jet printer. This is used to monitor and control variables such as character size, number of lines of print, material on which to print and print speed, and has reduced the need for time consuming manual adjustments and set up.

"Linx-up" with an Organiser

Not only does the Organiser act as an input device to control the printer, it also performs the role of "trouble - shooter". If a problem occurs during production, the operator is able to perform a series of basic checks on the printer, ink flow, etc, to determine what the problem may be and how it can be rectified. This simple diagnostic control system can check over 50 performance factors thereby reducing downtime and the need for constant servicing.

For further information contact:-

Linx Printing Technologies Ltd, Burrel Road, St. Ives, Huntingdon, Cambs. Tel:- (0480) 300755. Fax: (0480) 495093

Psion Conference on CIX

There is now an alternative way to stay in touch with other Organiser and MC users.

The Compulink Information eXchange (or CIX for short) is a computer conferencing system, allowing people to work and discuss matters anywhere and at anytime. You can call up CIX 24 hours a day, and leave messages for specific individuals or in general discussion areas. There are literally 100s of discussion areas, or conferences and thousands of users.

The PSION conference currently has conference topics for the Organiser and MC such as add-ons, applications and even a "wishlist".

If you want to give it a try, new users registering with CIX who type PSIONEWS at the "special code" prompt will receive a £5.00 discount on the registration charge. The numbers to call are 081-390-1244 or 081-399-5252, and your communication software should be set to 8 bits/1 stop bit/no parity. You can use a v21, v22, v23 or v22bis modem. Once registered you are charged for the time you are connected to CIX.

* Psion UK PLC have not seen or reviewed all the products listed here, and therefore cannot warrant their performance in any way.

Calling all Users

Finding telephone numbers is easy on an Organiser, now so is dialling them by using the DTMF Dialler from Transform Ltd.

This neat, compact unit fits into the top slot of the Organiser. When this is held close to a telephone it generates the tones of a modern digital telephone which are passed straight to the exchange (which must be digital).

For ease of use you can set up your own filing system of phone and fax numbers, categorised in up to 300 separate databases which the Dialler will support. Alternatively it will access any existing database files on an Organiser or Datapaks. What's more the Dialler has a last number redial facility, and will support both BT and Mercury systems.

With the spread of home banking services what could be easier than using the Dialler to set up one or more transactions and then when it is convenient make the transfer, secure in the knowledge that it will be sent without error. If regular monthly transactions are made, these can be stored and carried out each month at the touch of a button.

For further information contact: Transform Ltd, 7c Station Approach, Hayes, Kent. Tel: 071-462-4666

Latest Releases of Third Party Products

Industry

Name	Product	Description
Howard Humphreys & Partners Ltd. Thorncroft Manor Dorking Rd, Leatherhead Surrey, KT22 8JB Tel: 0372-376190	ROADRUNNER	Cost effective highway management system that utilises the Psion Organiser for Data Collection.
Instrumentation Technologies Autotech Bldg, Dominion Rd Bournemouth, BH11 8LH Tel: 0202-593005	Integrated Data Acquisition System (IDAS)	Data logging system for civil engineering environmental and similar industries.
Quality Technical Services 55 Ridgacre Lane, Quinton Birmingham, B32 1EL Tel: 021-422-0941	Hearing Protector Selector	Calculates attenuated sound levels on a library of hearing protectors.
	Add-man	Stores/sorts addresses on IBM PC in correct format for downloading to Organiser.
Rathe & Demus Bahnhofstrasse 29, D-6302 Lich 1, W. Germany Tel: 06404-45-33	FRESH-Utility	Fast 'update' of sorted records without destruction of file structures (replaces OPL-command 'update').
Data Acquisition & Technical Analysis Ltd 9 Bridge St, Aberdeen Tel: 0224-599180	Dataunit	Dimensional analysis based package permitting conversions between complex user defined units.

Consumer

Name	Product	Decsription
BroadOak Computing Ltd PO Box 366, London WC2E 9SQ Tel: 071-836-7460	Games	Anagrams, Magic, Nim, Roulette and Poker Dice.
Dataworks, 4 The Chequers Hills Rd, Buckhurst Hill IG9 5RH, Tel: 0860-441108	London Exchange Update	Auto update of Datapaks with new London exchange prefix codes.
Mackay Language Software 41 Kensington High Street London, W8 5ED Tel: 071-937-2077	French Prakpak	Conversation Phrase Book with sentence assembler & number translator.
	Attendance Pack	Client arrival and departure dates processed to see who is - or will be - with you.
	Morse Prakpak	Full-featured tuition and practice system for Amateur Radio users.
Monad International Ltd 42 Laburnum Rd, Chertsey Surrey, KT16 8BY Tel: 0932-565035	Easy-writing	Write fast on the Organiser using this revolutionary new technique.
Mr. I. Whittaker 1 Charlotte St, Chapletown Turton, Bolton, BL7 0ES Tel: 0204-852409	Astronomy Software	Astronomy on your Organiser. Celestial object database and positional calcualtions.
Pilotage Software Ashleigh Market Place Tetney, Grimsby S. Humbs, DN36 5NN Tel: 0472-814701	TIDESXP, TIDESLZ, PILOT	Tidal height computations, using Admiralty method NP159. General Pilotage routines.