



# Global Village Newsletter

Published by **Dark Star**  
SYSTEMS

WELCOME TO ISSUE NUMBER 3 OF DARKSTAR'S GLOBAL VILLAGE NEWSLETTER, CONTAINING DETAILS OF ALL OUR PRODUCTS

## Why Apple users need the Snapshot system.

Many computer users were originally attracted to the Apple II by the sheer number and diversity of the programs written to work with it.

Unfortunately, because so many programs for the Apple are copy-protected and/or use outdated or customized disk operating systems, many users cannot even begin to exploit its full potential.

Copy-protected programs restrict your ability to make backups, make screen dumps, and tailor software to your own requirements. Protection also means that many innovative utilities, such as the "program manager" for Cirtech's one Megabyte "PlusRAM" card, just won't work with most commercial programs.

In order to give Apple users a way to get the most from their hardware and software investment, Dark Star's engineers set out to design a system that could by-pass any operating system and all copy-protection. The result of their endeavours is the Snapshot card, a device with a remote trigger switch that can be installed in any vacant slot of the Apple II. When Snapshot's trigger is pressed, it causes a hardware interrupt that lets you suspend any running program, manipulate it, and then resume running it from the point of interruption.

The "manipulation" part is handled by a family of Snapshot software packages (Shuttle, Printerrupt, etc.) that can be loaded into the card and give you complete control over a variety of the Apple's essential functions.

### Even Great Products Need Great Backup

Certainly, a lot of Apple users find the Snapshot system very useful. But as one of our quoted customers suggests, the usefulness of a system is only part of the story. Buying computer products can sometimes be a risky business. Even the best-designed hardware and software manufactured to the highest possible specifications can present the unwary with unforeseen difficulties. We want you to feel confident about ordering products from us. That's why we at Dark

Star Systems back up everything we sell with an unbeatable service package that includes a 12 month no-quibble guarantee and free-of-charge technical support.

There are no hidden costs with the products we sell; everything you need to get up and running is included. And, in the United Kingdom, there is no charge for postage and packaging. If your configuration is unusual, we'll bend over backwards to support it. (Our engineers will sometimes spend weeks rewriting one of our programs to work with obscure equipment unavailable in the UK.)

We're happy to say that we've received many acknowledgements of our efforts to provide good service. Here are some extracts from our correspondence

on the subject:

I am an owner of the Snapshot Card. It is one of the greatest computing tools that I have run across. Thanks again for a great product.

*Timothy Esche -  
Washington, USA.*

Thank you for the quality of your service. I am VERY satisfied with Snapshot and the programs.

*Guido Bettiol -  
Saint Gilles, France.*

I've seen it, it works, I like it.

*The Editor -  
Open-Apple Magazine.*

## We're with you all the way.

Here's what some of our customers think of our service:

Dark Star Systems personnel have proved to be **helpful and responsive beyond the call of duty**. With their card and its associated software packages there seems to be virtually nothing you can't get out of your Apple onto the screen, disk, or printer.

...any company that makes a copy card on Robin Hood Way deserves success.

*Paul Pagel -  
Connecticut, USA.*

I would like to suggest that user groups compile a list of suppliers graded according to customer satisfaction in terms of sales and service, to be made available to members on request. For starters I would give **Dark Star Systems 10 out of 10**, A.C. Interaction 8 out of 10, Cirtech 7 out of 10... etc.

*Geoffrey Williams -  
(Open-Apple)*

I would like to congratulate the shuttle software which happens to be the best addition to the Apple IIe computer. I use it the following way: configure the shuttle for only the first 64k of my RAMworks card which is otherwise 512k and the last 384k of my Ramfactor card (which is 1024k). Now I load the expanded version of AppleWorks in space 1 which loads into the RAMworks card and 3 additional 128k programmes in the last 384k of the Ramfactor card. I still have a huge memory left for a RAMDISK.

Now comes the real fun! With such a set up I can easily manage to print graphics in my word processing document; like this:

I love you  
Dark Star!

A much better proposition than the Pinpoint:Graphmerge isn't it, which doesn't allow any text formatting options.

*Dr S Datye,  
Akureyri, Iceland*

21185  
2352  
3/3

**For MousePaint pictures on any  
printer, any way you choose —  
It's got to be MousePrintz.**

MousePrintz is a "patch" program which adds great new features permanently to Apple's graphics "painting" package, MousePaint. It not only lets you print your MousePaint pictures directly to virtually any dot-matrix printer, but gives you a mouth-watering menu of versatile screen-editing and printing features as well (See Table 1 for full details). Options include:

- \* Full-screen viewing of the current picture
- \* Full-screen image inversion
- \* Full-screen mirror image
- \* Full-screen upside-down image
- \* Full-screen cropping
- \* Independent expansion of the X and Y screen axes
- \* Clockwise and anti-clockwise rotation through 360 degrees
- \* Shading of black or white areas
- \* Setting of all available printer dot densities
- \* Visual and aural checking of the form position
- \* Chart recorder mode
- \* Auto-centering and adjustment of left and right margins
- \* Removal of Epson "pin-stripes"

MousePrintz is compatible with the 128K Apple //e and the Apple //c.

Thank you for your fine product — MousePrintz. It sure improves MousePaint for us Epson Printer Users.  
*Doug Trusty -  
Washington, USA.*

**ScreenSnapper -  
The Programmer's Printing  
Program**

ScreenSnapper is a software printing utility that makes the purchase of an expensive graphics printer card unnecessary. It is designed to greatly enhance your current printing configuration, and is intended primarily for use with your own Applesoft and machine-code programs (or other unprotected software) running on the Apple II+, //e and //c.

ScreenSnapper lets you interrupt and resume running programs in order to print the screen in a variety of ways with menu options offering enlargement, rotation, inversion, shading, etc. The menu can be called up from the keyboard, or from within a running program.

ScreenSnapper adds an extremely useful extension to Applesoft Basic that provides graphics programmers with a complete set of commands for double hi-res plotting plus additional commands which access the ScreenSnapper on-screen utilities. Other features include "what you see is what you get" facilities, and built-in print commands which can be slaved to virtually any printer card in emulation of a sophisticated graphics interface.

## IS YOUR EPSON PRINTER CARD A PROBLEM?

If you have an Epson 8132 printer card, you know that it won't work with AppleWorks, CP/M, Pascal, Ascii Express, etc. Don't despair: The ImageMaker EPC1 replaces the ROM chip on Epson's 8132 Parallel printer card, to make it compatible with everything, and in addition gives your Epson card the graphics printing features of a Grappler Plus. The ImageMaker is fully compatible with PASCAL and CP/M and works with other programs (like Appleworks) which the normal 8132 card can't handle either. All features are selected with standard control codes; i.e., the same codes used by most popular graphics printer cards, including the Grappler.

The EPC-1 also has a number of advanced text features including: fast, easy selection of Epson print modes, fonts and national character sets, page-length setting, fan-fold perforation skipping, left and right hand margin setting and word-wrap. Additional commands can be easily inserted within word processor documents and, with Apple-writer II, you can even use bit image graphics! Sophisticated graphics commands for hi-res screen dumps with options for enlargement either horizontally or vertically (or both), rotation, mixing screens, enhancement, a variety of dot-densities, shading and automatic centering in any support density. The ImageMaker CPC1 for the Cirtech Parallel interface and Cirtech Cachecards, and the Image-Maker SSC1 for the Apple Super Serial card and the Apple Imagewriter dot-matrix printer function in exactly the same way as the Image-Maker EPC1 and have identical features and commands.

The Image-Maker SSC1 is designed to function as an intelligent printer driver only and cannot be used for serial communications in the same way as the original Super Serial Card ROM. Replacing the chip is easy, using a chip extractor or a small screw-driver to prise the chip gently from its socket. Once you have accomplished its removal, put your 2716 EPROM away in a safe place in case you should need to re-install it at a later date. Then the replacement chip simply slots into its place.

*Please refer to Table on page 3 for further details.*

**DarkStar**

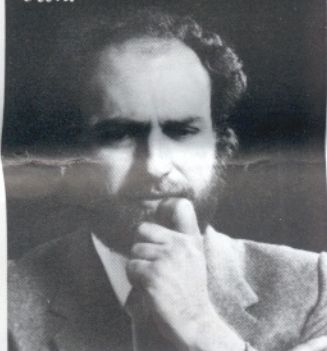
**Dark Star Systems Ltd. SYSTEMS**  
78 Robin Hood Way,  
Greenford, Middlesex UB6 7QW  
England

☎ 01-900 0104

Source Mailbox: BCJ456  
CompuServe Mailbox: 73317,3015  
Telex: 8813271 GECOMS G

# If only there were an alternative to integrated software!

*Where can I find an integrated package that combines the features and power of the programs I already own?*



*What will I do with the programs I use today if I buy integrated software tomorrow?*



*What if I can't use my old files with the new software?*



*Will I have to spend yet more time and money learning something completely different?*



You've probably considered the benefits of buying a program that does several different jobs from one disk. After all, most computer users need to switch from one task to another several times a day. And repeatedly closing down your current program, booting a different disk and then trying to find where you left off wastes valuable time and disrupts your flow of work.

Integrated software would be the obvious solution if it weren't for the fact that one Apple II user is likely to have very different needs from another.

The remarkable Snapshot Shuttle™ is an inexpensive device that gives you a simple alternative to worrying about the drawbacks of integration. It lets you keep up to four different programs in

memory at any one time.

You want to combine the best word-processor with the fastest spreadsheet, a versatile comms package and Hitch Hikers Guide to the Galaxy? Fine. With the Shuttle you're free to choose.

You can switch rapidly between your programs with just the flip of a switch, and each one resumes running exactly where it was interrupted. No fuss, no waiting. The Shuttle even works happily with integrated software!

You already know everything you need to know to use the Shuttle. There are no new commands for you to memorize and no piles of impenetrable documentation to wade through. And because it uses the interrupt-and-resume power of the Snapshot card, the Shuttle gives you access

to a whole new world of great, easy-to-use utilities that will enhance your Apple at home and in the office.

Ask your local Apple dealer to demonstrate the power of the Shuttle for you, or write or call us for more information.

#### PRICES (ex VAT)

Shuttle software and Snapshot card ..... £115.00  
 + 1 other Snapshot software pack ..... £130.00  
 + 2 other Snapshot software packs ..... £140.00  
 + 3 other Snapshot software packs ..... £150.00  
 (Snapshot software packs are available separately at £20.00)

#### SYSTEM REQUIREMENTS

Apple II+ or IIe with minimum 128K RAM and 1 disk drive.

#### MEMORY EXPANSION CARDS

The Shuttle will let you load 2 x 64K programs into a 128K Apple. Naturally, the more memory you have, the more programs you will be able to load. The Shuttle works with all the popular RAM cards

#### TERMS

Dealer and distributor terms are available on application.

If ordering direct, please enclose cheque or quote details of your Visa, MasterCard or American Express account.

#### SHIPPING

First Class postage & packing free of charge in UK

Add £2.00 for airmail to Europe

Add £5.00 for airmail to anywhere else



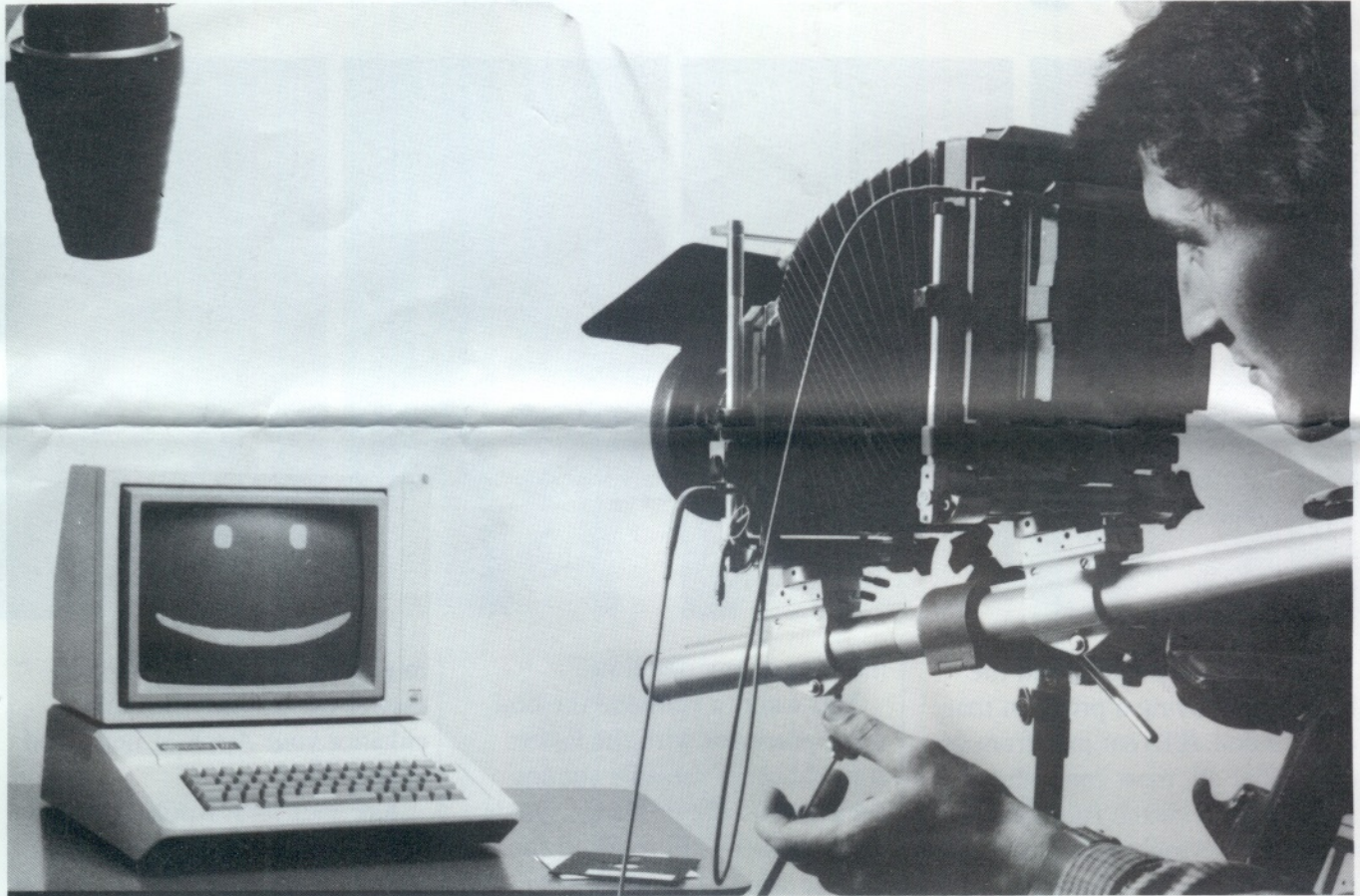
**The Snapshot Shuttle.  
 The shortest distance  
 between your  
 favourite programs.**

**DarkStar**  
 SYSTEMS

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# Some people go to extraordinary lengths to get a good picture!



Frustrating, isn't it? That dot-matrix printer and expensive interface card were supposed to let you print your Apple's display whenever the fancy took you.

But to get a print-out, you have to crash your program or make a file. Either way, it's a slow and tedious business. Then there's that long list of control commands you need to learn. And how are you supposed to capture the screen from a copy-protected program?

But hold on, don't reach for the camera yet!

The Snapshot Printerrupt gives

you a better alternative; a different kind of printing utility. No matter what program your Apple II+ or //e is running, the Printerrupt can interrupt it, print its display, and resume running it as though nothing had happened. No files needed, no photography, and no frustration.

What's more, the Printerrupt's easy-to-use menu features a galaxy of *really* powerful options which put other printing utilities to shame.

And because it uses the interrupt-and-resume power of the Snapshot card, the Printerrupt

gives you access to a whole new world of great, easy-to-use utilities that will enhance your Apple at home and in the office.

Ask your local Apple dealer to demonstrate the power of the Printerrupt for you, or write or call us for more information.

#### PRICES (ex VAT)

Printerrupt software for Snapshot //e card .....	£20.00
Shuttle software for Snapshot //e card .....	£20.00
Copykit software for Snapshot //e card .....	£20.00
Shell software for Snapshot //e card .....	£20.00
Shuttle, Printerrupt, Copykit and Shell combination pack .....	£55.00
Snapshot //e card for Apple II+ and //e (requires software) .....	£95.00

#### TERMS

Dealer and distributor terms are available on application. If ordering direct, please enclose cheque or quote details of your Visa, MasterCard or American Express account.

#### SHIPPING

First Class postage & packing free of charge in UK  
Add £2.00 for airmail to Europe  
Add £5.00 for airmail to anywhere else



**The Snapshot  
Printerrupt.  
Perfect pictures  
every time**

**DarkStar**  
SYSTEMS

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Source Mailbox: BCJ456

# NEWSFLASH

**CIRTECH** 

**points the way**

## plusRAM

*the COMPLETE range of memory cards*

plusRAM and plusRAM-xtra (with the unique RamDesk Manager memory management system) are designed for the II+, //e or IIgs, giving 256K to 1 Megabyte extra memory. plusRAM-GS2 and GS8 are designed for the IIgs, giving up to a massive EIGHT MEGABYTES of extra memory - on one card! You can even add a further 512K with the instant-loading ROM/PRODM-Disk Adaptors. plusRAM cards are fully ProDOS DOS 3.3, Pascal & CP/M compatible and are used by standard Apple II programs as super-fast electronic disk drives! plusRAM cards also feature AppleWorks 2.0/1.3 expansion with multiple disk saving, mouse control, date/time display, print buffer and calculator (also allows use of AppleWorks 1.3 on the II+).

**FROM ONLY £99.00**

POWER

**CIRTECH** 

## CIRTECH CP/M PLUS

*Advanced operating systems*

The sophisticated new CP/M Plus Systems let you use the huge range of CP/M programs, like dBASE & WordStar, on your Apple IIgs, //e or //c! With a lightning-fast 8MHz co-processor card and the most advanced version of CP/M Plus, these Systems make full use of the Apples' power. Pop-up ToolKey windows allow you to copy and format disks, print screen dumps, control internal print buffers, etc, at any time! The Inbuilt File Manager, with pull down windows, keeps track of your programs and can be used to select user areas run, copy, delete or rename files; & there's even an on-screen, full-function calculator! Fully compatible with all Apple-standard devices and you can even use CP/M Plus & ProDOS on the same hard disk!

**TOP PERFORMANCE - £118.00**

**CIRTECH** 

INNOVATION

**CIRTECH** 

**the way forward**

**Uni-Mate**  
*A disk's best friend!*

Uni-Mate gets rid of all those tiresome disk constraints, with support for several storage devices under DOS 3.3, PASCAL 1.1/1.2 & CP/M 2.20b/2.23 on the various models of Apple computers:

	DOS	PASCAL	CP/M
UniDISK 3.5	+ e c g	+ e c g	+ e c
3.5 Disk	g	g	
Slot RAMcard	+ e c g	+ e c g	
SCSI Hard Disk	+ e c g		
SmartPort Hard Disk	+ e c g	+ e c g	
Profile Hard Disk	+ e c g	+ e c g	
IIGS Internal RAMdisk	g	g	
IIGS Internal ROWdisk	g	g	

(+ = Apple II or II+; e = Apple //e;  
c = Apple //c; g = Apple IIGS)

**TOTAL VERSATILITY**  
**FOR ONLY £28.00**

**HD-Mate**

*Ultimate Hard Disk Partitioning*

The HD-Mate utility is designed to allow you to have both ProDOS and PASCAL 1.3 programs on the same Hard Disk! (And if you're already using Cirtech CP/M Plus, you can have three operating systems on the same Hard Disk!) Simply select the sizes of the ProDOS and PASCAL areas you wish, install the PASCAL area, and you're ready to start using your new-look Hard Disk. The PASCAL area is divided into two equal-sized volumes called HDMATE1 and HDMATE2. Normal operation of the Hard Disk is not affected and all standard PASCAL 1.3 and ProDOS commands work in exactly the same way as with an ordinary disk drive. You can start up PASCAL or ProDOS from any disk drive (including the Hard Disk) and both systems will see their appropriate part of the Hard Disk.

**MAKE THE MOST OF YOUR HARD DISK**  
**WITH HD-MATE £38.00**

**CIRTECH**

**VERSATILITY**

**CIRTECH CHAMPIONS**  
*first choice for printing!*

The Champion range of printer interface cards for the Apple II+, //e and IIGS give you all the text and graphics print commands you'll ever need (like text and graphics screen dumps, character font/size selection, line/page/margin controls, \$ or £, independent X & Y axis scaling, etc.) Text printing is supported on all modern printers, with graphics features available on all printers with 'Epson-type' graphics codes. Compatible with ProDOS, DOS, CP/M & PASCAL, Champion cards have a full 8 bit parallel interface as well as built-in serial I/O capability for RS232c type interface using a Serial Adaptor.

Champions are also available with a massive 64,000 character buffer & Imagerwriter/DMP printer and EPROM programming versions.

**FROM ONLY £49.00**

**CIRTECH**

**VALUE**

**CUT PRINTING TIME**  
*with a Cirtech CACHEBOX*

No more wasted time waiting for a slow print operation to finish - with a CACHEBOX connected between your computer and printer, data is accepted as fast as your computer can send it (up to 20,000 characters per second). CACHEBOX stores the data in memory, leaving you free to use your computer while it takes care of the printing. Lengthy documents can also be stored in CACHEBOX until you're ready to print them and, with the multi-copy facility, you can make as many copies as you like, when you like! CACHEBOX comes complete with all required cables & is available in two sizes, 256K or 512K (enough for 200 or 400 full A4 pages!) in three interface configurations: parallel input/output; serial input/output; and parallel or serial input or output.

**FROM ONLY £198.00**

*I want to know more - please send me full data on all the CIRTECH products!*

NAME: \_\_\_\_\_

ADDRESS: \_\_\_\_\_

Your CIRTECH dealer:

**DarkStar**  
**SYSTEMS**

DARK STAR SYSTEMS LTD., 78 ROBIN HOOD WAY, GREENFORD, MIDDLESEX UB6 7OW, ENGLAND.  
TELEPHONE: 01-900 0104    TELEX: 8813271 GECOMS G    SOURCE MAILBOX No.: BCJ 456

**Give your APPLE the best!**

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**CAN YOU BE CERTAIN YOU WILL NEVER ACCIDENTALLY CORRUPT OR ERASE YOUR COPY-PROTECTED PROGRAM DISKS?**

And what will you do when those irreplaceable disks finally wear out?

Of course you may be lucky. For you, a damaged disk may mean only weeks, maybe months, of waiting for a costly replacement. If you're not so lucky, the company that produced the software you depend on is now out of business.

The only effective way to safeguard your software investment is to make backups. Some publishers encourage you to copy their products, others use copy-protection to make it as difficult as possible.\*

The Snapshot Copykit is an easy-to-use device which helps you to make backups of your essential programs whether they're copy protected or not. It will copy memory-resident software in less than half a minute, and it's invaluable for dealing with multi-access programs too.

Using Copykit backups rather than your valuable originals doesn't just make sense from a security point of view. Fast saving and loading of total memory saves hours of time when you need to work with spreadsheets or other programs which take an eternity to handle large files. And if games are your thing, there's no need to go through the easy, boring levels of play every time you resume the action you can use the Copykit to go straight to the highest levels and return to them again and again.

The Snapshot Copykit. Peace of mind at the press of a button.

\* Check the terms of your software license - by making even an archival backup, you may be in breach of Copyright.

**SNAPSHOT SOFTWARE PACKAGE UPDATES — WHAT THE LATEST VERSIONS HAVE TO OFFER:**

- \* Support for all the popular Apple II+ 80-column cards (Videx, Sup'RTerm, Vision 80, etc.)
- \* Support for the enhanced Apple II/e with MOUSETEXT ROM, etc.
- \* Support for double hi-res graphics programs
- \* Support for Apple Mouse programs (Mouse Calc, MouseDesk, MousePaint, etc.)
- \* Faster operating system - DS-DOS with TLIST command for reading text files (like CP/M TYPE command).
- \* Shuttle support for all the new RAMcards and up to four 128K programs.
- \* Printinterrupt option for viewing and printing MousePaint pictures. Many new printers supported
- \* More sophisticated Copykit "self-locating loader".
- \* Support for Applesoft Basic programs in the Shell.

The current software versions are:

Copykit	vers. 10.2
Shuttle	vers. 11.7
Printinterrupt	vers. 11.2
Shell	vers. 10.0

**NOW'S THE TIME FOR SNAPSHOT AND SNAPSHOT TWO OWNERS TO UPGRADE TO THE VERSION //E SNAPSHOT SYSTEM.**

If you are the owner of one of the original Snapshot or Snapshot Two cards designed for use with the Apple II+, you can still take advantage of our hardware upgrade offer. The version II/e system is compatible with the Apple II+ and II/e, and upgrading means you can join the thousands of Apple users worldwide who benefit from the latest Snapshot multitasking, printing, backup and custom-software enhancements — at a considerable saving.

Simply send us your old disk serial number and payment of £100.00 (plus VAT or airmail postage and packaging as appropriate) and we will immediately despatch your Snapshot version II/e card complete with Copykit, Shuttle, Printinterrupt and Shell software packages.

**Table 1. Dark Star Printer Utilities Feature Guide**

Feature	Printinterrupt	ScreenSnapper	MousePrintz	ImageMaker
Apple supported	II+ & II/e	II+, II/e & II/c	//e, II/c, II/GS	All
Dot-matrix printer supported	All	All	All	Epson compatibles and ImageWriter
Printer interface supported	All	All	All	Epson 8132, Super Serial & Cirtech
Operating systems supported	All	DOS 3.3	Prodos	All
Programs supported	All	Unprotected	MousePaint	All text and graphics printing programs incl. AppleWorks, Wordstar, Print Shop, etc. & users' own
Program interrupt-and-resume	Yes	Yes	Yes	No
Menu-driven	Yes	Yes	Yes	No
Uses industry-standard control commands	N/A	Yes	N/A	Yes
Built-in Double Hi-Res Support	Yes	Yes	N/A	No
Enables mixing of Text and Graphics	Yes	Yes	N/A	Yes
80-column text screen dumps on Apple II/e	Yes	Yes	N/A	Yes
80-column text screen dumps on Apple II+	Yes	Yes	N/A	No
Magnification of the X and Y axes up to 8 times	Yes	Yes	Yes	Yes
Clockwise rotation	Yes	Yes	Yes	Yes
Anti-clockwise rotation	Yes	Yes	Yes	No
Inversion	Yes	Yes	Yes	Yes
Supports all available printer fonts and character sets	Yes	Yes	Yes	Yes
Supports all available printer dot-densities	Yes	Yes	Yes	Yes
Optional printed shading of black or white picture areas	Yes	Yes	Yes	Yes
And/or/ex-or of Pages 1 and 2	Yes	Yes	Yes	Yes
Visual and aural indication of the form position	Yes	Yes	Yes	No
Auto-centering of form position	Yes	Yes	Yes	No
Left and right margin setting	Yes	Yes	Yes	Yes
Chart recorder mode	Yes	Yes	Yes	Yes
Enables removal of Epson pin-stripes	Yes	Yes	Yes	Yes
On-screen viewing of MousePaint picture	Yes	No	Yes	No
On-screen viewing of all standard text and graphics pages	Yes	Yes	N/A	No
On-screen image inversion	No	Yes	Yes	No
On-screen mirror image	No	Yes	Yes	No
On-screen upside-down image	No	Yes	Yes	No
On-screen cropping window	Yes	Yes	Yes	No
Adds commands to Applesoft	No	Yes	No	Yes
Prints hi-res graphics stored as regular text files of hex values	No	Yes	No	Yes

# Ignore Previous Article!

**Our preceding issue carried a long article comparing the many RAM-cards for the Apple II. Forget it. Throw it away. Everything's changed.**

In the first place, the price of RAM chips has come way down. This means that you can expand your Apple's memory for a fraction of what it would have cost you a year ago. It also means that if you buy an imported RAMcard the shipping costs and duties are a significant proportion of the card's cost.

In the second place, the new Apple //GS is on sale. If you add memory to your Apple II+ or //e, you'll want a memory card that can also work in a //GS (since many of you will be upgrading to a //GS when you discover what a superior computer it is.)

In the third place, it's become clear that making RAMcards is an art, not a science. RAM chips are extremely complex and finicky devices. RAMcards can be sensitive to fluctuations in your Apple's power supply, to static generated by the other cards in your Apple, and to the phases of the moon. No matter how carefully a manufacturer's RAMcards are designed, made, and tested, there's always a few percent that may fail in your Apple. The failures may be occasional, random, and depend on what data is in the card. It may be difficult or impossible to determine the cause of the failure, especially when you return the card to your dealer and he says, "Well, it works all right in MY Apple!" (If it came from abroad, he won't want to return it to the manufacturer for servicing. If it came from Taiwan, he won't even be sure who the manufacturer is.) So the first three rules to follow are:

- **BUY A CARD WITH A GOOD REPUTATION.**
- **BUY A CARD MADE IN YOUR COUNTRY, IF POSSIBLE.**
- **BUY FROM A DEALER WHO UNDERSTANDS ABOUT RAMCARDS.**

The first popular memory expansion cards were the Saturn 128K cards. These have been cloned by many Oriental manufacturers. Even the clones are now rather expensive for the amount of memory on them. The only reason to get one is if you are sure you will never want more than 128K (unlikely) or if you are using some ancient software that specifically requires a Saturn card. Most newer software does NOT know how to use a Saturn card.

## Ramworks-type Cards

Cards that sit in the //e's auxiliary slot have been popular for several years. These replace the standard 64K 'extended 80-column card' (which every //e should have - we sell the inexpensive and reliable Cirtech card.) These cards include the Applied Engineering Ramworks, Checkmate Multiram, Titan Neptune, and AST MegaRam Plus cards. Ramworks in particular is one of the best-selling RAMcards in America. All of these cards come with special software to

modify ('patch') Appleworks so that it knows how to expand into the card, and software to patch your other software's operating system (DOS, ProDOS, Pascal, and possibly CP/M) so that the operating system knows how to use the card as a RAMdisk, i.e. a big fast pseudo-disk drive.

## The Slinky Standard

While Ramworks and its competitors were stuffing the world's auxiliary slots with RAM, however, Apple came out with its very own RAMcard, the "Apple Memory Expansion Card", popularly known as Slinky. Slinky contains up to 1 Megabyte (1024K) of memory, and sits in any of the regular slots on a II+ or //e. Because it came from Apple, Slinky established a standard to which other hardware and software manufacturers are beginning to adhere. Most of the manufacturers mentioned earlier have come out with Slinky-type cards, e.g. the Applied Engineering Ramfactor and the AST Sprintdisk. Cards of this sort have critical advantages over auxiliary-slot RAMcards:

- ProDOS, CP/M Plus, and Pascal 1.3 automatically recognize the card as a RAMdisk.
- Appleworks automatically expands its desktop into the card.
- You can expect all future Apple software to recognize the card.
- The card automatically patches DOS to see the card as a RAMdisk.
- If you put something in the RAMdisk, and then use the Apple for something entirely different, you can generally reboot the Apple from the RAMdisk and find your original programs still there.
- Because the card sits in a regular slot, it can be moved to a II+ or a //GS. (Not all cards are fast enough for a GS - ask before buying.)
- While it does take up a regular slot on the //e, you don't have to throw away your 80-column card to make room for it.

So unless you're really desperate for a free slot in your //e, or your software absolutely demands it, you should always choose a Slinky-type card over a Ramworks-type card. If you must have a Ramworks-type card, Dark Star will be happy to supply you with an authentic Ramworks card, direct from the oil fields and big hats of Texas.

## What's So Special About PlusRAM?

Of all the Slinky-type cards, we strongly recommend the Cirtech PlusRAM. It's a beautiful piece of engineering workmanship, it's very reliable, and it does everything the other Slinky-type cards do. And it's incredibly inexpensive: about half the price of its rivals. Cirtech cards are made in Scotland, so you know that in case of difficulty, help is only a phone call away. Our experience is that Cirtech are superbly considerate of their customers, and willing to assist them above and beyond the call of duty.

You can order the PlusRAM directly from

Cirtech, or you can take advantage of **Dark Star's 10% discount** on all Cirtech products.

There are two flavors of the PlusRAM card: PlusRAM and PlusRAM-xtra. The PlusRAM can be ordered with 256K, 512K, 768K, or 1 Megabyte of memory. It has sockets for a full Megabyte of memory chips, so you can always get a 256K card now and purchase more memory chips for it later. The PlusRAM-xtra comes with 1 Megabyte, and includes a special program (on disk) called the **Ramdesk Manager**. The Ramdesk lets you divide the card's memory into up to four Program Areas. Each Program Area can behave like a completely independent RAMdisk, with a different operating system in each one. You could have Appleworks (ProDOS) in one area, Wordstar (CP/M) in a second area, and Format-80 (DOS) in a third. The Ramdesk lets you quickly back up any Program Area to disk, or restore it again from disk.

The Ramdesk is not as powerful as Dark Star's own Shuttle program. The Shuttle, unlike Ramdesk, can handle protected software that doesn't use a standard operating system. The Shuttle, again unlike Ramdesk, lets you switch out of the middle of a program, use another program for a while, and then resume the first program where you left off. (The Shuttle, by the way, can work with any of the RAMcards mentioned in this article.) But if you don't want to buy a Shuttle to go with your PlusRAM, the PlusRAM-xtra with the Ramdesk is a worthy second choice.



## Terms

Orders must be accompanied by payment in Pounds Sterling (or, if on behalf of an European government/state institution, by an official purchase order).

Dealer and distributor terms are available on application.

### Shipping - United Kingdom

All goods by First Class Mail Free of Charge

### Air Letter Shipping - Europe

Any quantity of Software.....£2.00  
Hardware (inc. hard/software packages) £2.00 per item.

### Air parcel Shipping - Outside Europe

Any quantity of Software.....£5.00  
Hardware (inc. hard/software packages) £7.00 per item.