



No 1 July 1981

Managing Editor
Derek Meakin

Art Editor
Peter Glover

Advertisement Manager
John Riding

Tel: 061-456 8383 (Editorial)
061-456 8500 (Advertising)
061-456 8353
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Telex: 665350 EUROPA-G

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LISTING

16	MicroModeller Crystal ball of the '80s?
21	Surround Try this fast-moving game
23	Bach and the byte Mountain Hardware MusicSystem
31	Applecart The computer in education
37	Appletips . . . random numbers to EXEC files
40	Compucopia What's new in software/hardware
42	Format 80 Word processor typists love
48	Profile Mr Apple in Britain
53	Cis Cobol The flexible file handler
57	What's news.. Windfall's chat show

WE'RE working on a fabulous holiday offer that will be exclusive to readers of Windfall - a 16-day visit to America's West Coast, staying in first class hotels in San Francisco, Las Vegas and Los Angeles . . . and with a tour of the Mecca of the world of computers, the legendary Silicon Valley.

We want this to be a holiday to remember, so our instructions are that everything must be of the very best - scheduled air flights (not charter), rooms with private baths, sightseeing trips, the red carpet treatment from beginning to end. And we've said all this must be included for less than £600. How's that for a bargain?

The dates we suggest are early November or in February or March of 1982. You don't have to book now. But if you're interested let us know and we'll send you further details. Write to: Holiday Offer, Windfall, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY.

Come with us... to

SILICON
VALLEY



No 2 August 1981

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Derek Meakin

Editor
David Chadwick

Art Editor
Peter Glover

Advertisement Manager
John Riding

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LISTING

14

Networks

Talk to another Apple

17

What's news...

Windfall's chat show

18

Compucopia

What's new in software/hardware

21

Make a date

Some useful routines

24

Boris Allan

The limits of his world

30

Word Processor

Down Under design reviewed

37

Applecart

The computer in education

43

Conversion

Integer Basic to Applesoft

47

Book review

Machine code minus maths

60

Feedback

Your views

**Teach
your
Apple
to sing!**

WINDFALL is organising a Music and Speech Synthesiser Workshop, to be held in Manchester on Saturday, September 26. While primarily designed for Apple users, it will be open to anyone interested in this fascinating subject.

The music side of the workshop will be the responsibility of Dr David Ellis, who runs the London-based Apple Music Synthesis Group.

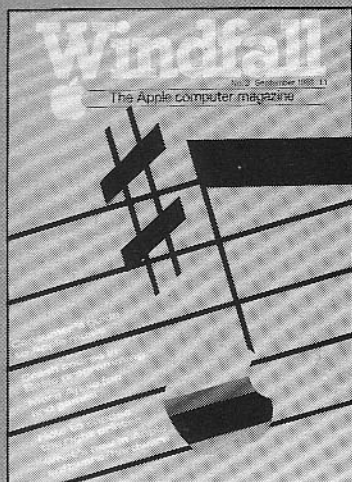
The speech synthesis section is in the hands of a number of experienced users, including a team from Salford University.

Aim of the workshop is to create a greater awareness of the remarkable developments now being made in music and speech synthesis systems.

There will be lectures on various technical aspects of using a computer to create music or speech, as well as a general "hands on" session where you can try out the equipment and talk to the experts. Several Apple-based systems will be represented, including an Alpha-Syntauri keyboard.

More details will be given in the next issue of Windfall. But as it is expected that a lot of Apple users will want to attend the workshop we urge any readers interested in this subject to write to us now to reserve a place.

The address is: Music and Speech Workshop, Windfall, Europa House, 68 Chester Road, Hazel Grove, Stockport SK7 5NY.



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Derek Meakin

Editor

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Technical Editors

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Max Parrott

John Watson

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John Riding

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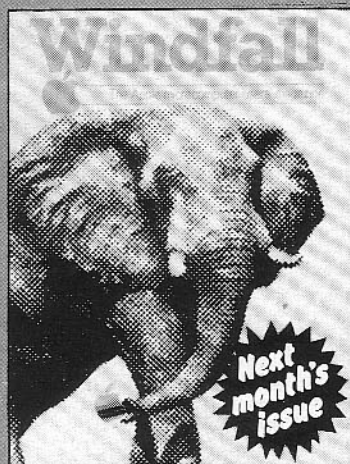
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LISTING

12 Apple music
Comprehensive consumers' guide

16 Gamesmanship
Three new offerings reviewed

18 Ski Run
Take your Apple on a downhill race

21 Valuable variables
Foil the microsecond munchers

24 Applications
Non-linear curve fitting

28 Feedback
Your views

29 First steps
Routines in machine code

32 Crash course
Seven days to pick up programming

34 Compu copia
What's new in software/hardware

37 Appletips
To make life easier

39 Printers
Get your priorities right

42 Communications
Making most of modems

46 What's news..
Windfall's chat show

52 Case history
Personal computing at SEGAS

58 User groups
Monthly round-up

LISTING



No 4 October 1981

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Technical Editors
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John Watson

Advertisement Manager
John Riding

Advertising Sales
Stephanie Nowell

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- | | |
|-----------|--|
| 13 | Review
Micro Planner, the patient one |
| 16 | Gamesmanship
From Napoleon to Raster Blaster |
| 18 | Puzzle
Strictly for squares |
| 21 | What's news..
Windfall's chat show |
| 27 | First steps
Keeping our dumps elegant |
| 31 | Communications
American Apples have it made |
| 34 | Crash course
Now try branching out |
| 36 | Apple music
Completing our consumers' guide |
| 40 | Case history
Quick dummy runs |
| 44 | Compucopia
What's new in software/hardware |
| 47 | Applecart
The computer in education |
| 51 | Feedback
Your views |
| 55 | Appletips
They make life easier |
| 58 | User groups
Monthly round-up |



No. 13

July 1982

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LISTING

17	WHAT'S NEWS . . . A quick look at the Apple world
23	COMPUCOPIA The latest in software/hardware
30	APPLETIPS They make programming easier
33	GAMESMANSHIP Pursuit of the Graf Spee
34	ELEMENTS of the APPLE Prerequisites of design
38	APPLE '82 Our first convention reviewed
43	FORTH Part II of Keith Lander's article
48	VISICALC Making the most of its capabilities
55	DIALECTS Paul Rayner looks at Basic
56	ORMBETA Finding your ideal system
60	USER PORT Powerful port for the handyman
63	MONITOR CHECK A plotting routine problem
65	EARTH DEFENCE ! A schoolboy's complex action game
70	FEEDBACK Aid for creature venturers
72	PROGRAMMING Interrupting your Apple
75	APPLECART The computer in education
85	ABC of the APPLE Handy glossary

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LISTING

Vol. 2 No. 2 August 1982

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Mike Hayes

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17	WHAT'S NEWS . . . A quick look at the Apple world
23	COMPUCOPIA The latest in software/hardware
28	THE MICRO PARADOX Why Apple's keeping mum
30	APPLETIPS They make programming easier
33	GAMESMANSHIP Suffering from battle fatigue
36	DESIGN Making the most of your software
39	MORSE CODE Learning it without going dotty
48	VISICALC 'Thinking Matrix' keeps it simple
53	PASTEXT II Formatting's the name of the game
56	PROGRAMMING Interrupting your Apple
58	OMNIS The wait is worthwhile
60	TEMPO Melody from your micro
65	DIY MOD Make Videx appreciate Pascal
70	FEEDBACK Poke in your point of view
72	MAH JONG Easier than you might imagine
74	SORTING RA Mould considers bubbles and shells
77	APPLECART The computer in education

LISTING



Vol. 2 No.3 September 1982

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21	COMPUCOPIA The latest in software/hardware
26	APPLETIPS They make programming easier
29	CP/M Making back-up discs
35	GAMESMANSHIP Take on Odyssey . . . fly Choplifter
38	VISICALC DOS isn't just any old boot
41	GAME Score wins with strings
42	TASC COMPILER Storing numeric arrays
44	MED-RES GRAPHICS A touch of the Van Goghs
49	MORSE CODE Communication aspects
53	DIY Push buttons to ease MCQs
54	PROGRAMMING Access to Apple memory
59	BAG OF TRICKS Insurance you can't miss
60	G-WHIZ Program for pilots
62	FEEDBACK Giving CTRL-C the KO
65	MEDICAL RECORDS Software for the surgery
69	APPLECART The computer in education

LISTING



Vol. 2 No. 4 October 1982

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19	COMPETITION Win a Christmas Bit Stik
20	APPLETIPS They make programming easier
23	COMPUCOPIA The latest in software/hardware
31	GAMESMANSHIP Tackling Knight of Diamonds
35	THINK TANK New forum for programmers
38	MED-RES GRAPHICS Filling in the shapes
41	LISA Assemble: for all abilities
44	VISICALC A touch of magic
46	BFM . . . speedy way to harness power
50	SHELLSORT Keeping track of variables
57	APPLE-VOX Good line in synthetic chat
60	FEEDBACK Guides to machine languages
64	MORSE CODE The final listing
67	APPLECART Age of the multi-disciplinarian
77	ABC of the APPLE Dictionary for beginners
81	APPLE CLASSIFIEDS Our marketplace for sales and wants



LISTING

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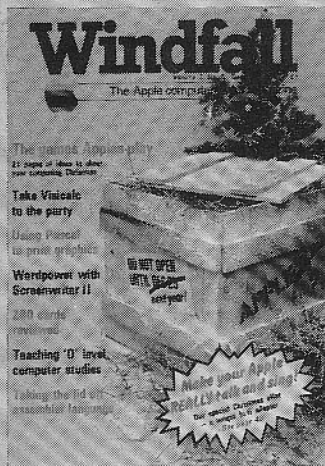
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- | | |
|----|--|
| 17 | WHAT'S NEW
A quick look at the Apple World |
| 19 | APPLE '83
Preparing for the big show |
| 23 | THINK TANK
New forum for programmers |
| 26 | PROGRAMMING
CALL in those PEEKing POKEs |
| 28 | APPLETIPS
They make programming easier |
| 31 | GAMESMANSHIP
Blend of brains and brawn |
| 34 | EVALUATION
Three 80 column cards compared |
| 40 | VISICALC
Brush up your algebra |
| 44 | BIT STIK
Graphics by the pageful |
| 49 | COMPUCOPIA
The latest in software/hardware |
| 55 | APPLECART
Educational software pitfalls |
| 60 | FEEDBACK
Servicing data needed |
| 65 | MED-RES GRAPHICS
Useful ampersand routine |
| 77 | ABC of the APPLE
Dictionary for beginners |

LISTING



Vol. 2 No. 6 December 1982

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Advertising Sales
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Marketing Manager
Bruce Everiss

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expressed.

17 **WHAT'S NEW**
A quick look at the Apple world

23 **THINK TANK**
Our forum for programmers

26 **GRAPHICS**
Doing the impossible in Pascal

29 **MACHINE CODE**
Interactive editor-assembler

32 **VISICALC**
VC magic for Christmas parties

36 **APPLETIPS**
They make programming easier

Get
into the
Christmas
spirit now

GAMES!

Page after page of
ideas start on 39

60 **FEEDBACK**
Programs that do . . . and don't

63 **APPLECART**
Aid for tyro computer teachers

69 **SCREENWRITER II**
Word processor package reviewed

72 **PEEK and POKE**
Max Parrott concludes his beginners' guide

75 **COMPUCOPIA**
The latest in software/hardware

81 **CP/M**
Z80 cards for the Apple II



Vol. 2 No. 7 January 1983

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Peter Glover

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LISTING

17	WHAT'S NEWS ... A quick look at the Apple world
22	THINK TANK Our forum for programmers
26	REVIEW Secrets of Apple graphics
28	APPLETIPS They make programming easier
30	GAMESMANSHIP Fairy tale for adults
34	DISCS Six pages on memory storage
36	BUBBLE MEMORY MPC card reviewed
37	RAM CARDS Showing a clean pair of heels
38	RELIABILITY Don't let back-up get you down
39	DUOFILE and UNIFILE New drives offer massive storage
40	TRON Electronic odyssey from the Apple
42	GRAPHMAGIC As easy as pie charts
45	COMPUCOPIA The latest in software/hardware
50	CP/M Installing Wordstar
52	FEEDBACK Plea for the raw recruit
55	VISICALC Keep that cash flowing
59	APPLECART Pilot for teachers
62	ASSEMBLER What it's all about ...



Vol. 2 No. 8 February 1983

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26	ASSEMBLER The process in action
28	APPLETIPS They make programming easier
31	SCRABBLE Designing . . . implementing . . . testing
35	VISICALC The delights of DIF
39	GAMESMANSHIP On the road to Nugglyland
43	STRUCTURED BASIC New life for Applesoft
49	GRAFORTH For education and games
51	NEW APPLES UNVEILED Full story of Lisa and Apple IIe
57	PASCAL POINTERS Two pages of programming tips
61	BUSINESS Project management
64	TIME SAVER Handling interrupts
68	APPLICATION Putting fish in their place
70	UPDATE Date-stamping DOS
71	APPLECART Cutting teacher prompts
76	FEEDBACK Extending stock control
79	COMPUCOPIA The latest in software/hardware
86	FORMATTING Improving Applesoft listings

LISTING



Vol. 2 No. 9 March 1983

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expressed.

- | | |
|----|--|
| 14 | APPLE DARTS
Use our listing, and fire away |
| 17 | WHAT'S NEWS ...
A quick look at the Apple world |
| 23 | THINK TANK
Our forum for programmers |
| 26 | BEGINNERS, PLEASE
Using the System Master disc |
| 28 | APPLETIPS
They make programming easier |
| 33 | GAMESMANSHIP
Our monthly look on the light side |
| 36 | LOWER CASE DISPLAY
How to use it in Basic strings |
| 37 | OFFER OF THE MONTH
Windfall's lower case generator |
| 39 | VISICALC
Magnificent obsession called Multiplan |
| 44 | LISA AND THE IIe
They live up to expectations |
| 48 | APPLEWRITER III
Best of the bunch? |
| 53 | APPLESOFT
Beat the bugs in error handling |
| 56 | ASSEMBLER
Putting it to work |
| 58 | APPLICATION
Apple on the pig farm |
| 60 | FEEDBACK
Where to find help |
| 63 | APPLECART
Geometry drill examined |
| 67 | COMPUCOPIA
The latest in software/hardware |
| 72 | CP/M
CLIP the cost of a good memory |

LISTING



Vol. 2 No. 10 April 1983

Managing Editor
Derek Meakin

Art Editor
Peter Glover

News Editor
David Creasey

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expressed.

- | | |
|----|--|
| 17 | WHAT'S NEWS
Inside look at the Apple world |
| 21 | THINK TANK
Our forum for programmers |
| 25 | GAMESMANSHIP
Tackle Type and learn a craft |
| 29 | WORD PROCESSORS
Four packages reviewed |
| 36 | APPLETIPS
They make programming easier |
| 39 | VISICALC
Economics of electronic worksheets |
| 41 | BOOK REVIEW
Assembly language programming |
| 43 | GONE FISHING
Nine-year-old's game listing |
| 47 | APPLICATIONS
Apples into pet food and pictures |
| 48 | APPLE IIe
The thinking behind improvements |
| 54 | BEGINNERS, PLEASE
Now start experimenting |
| 58 | OMNIS
Re-engineered for humans |
| 60 | FEEDBACK
Apple Pilot problems |
| 62 | STROBE 100
Persistence produces fine graphics |
| 65 | APPLECART
Make it CAT, not CAL |
| 71 | COMPUCOPIA
Latest in soft and hardware |
| 76 | ACCOUNTING
Hilderbay Bookkeeper reviewed |
| 79 | CP/M
The friendlier approach |



Vol. 2 No. 11 May 1983

Managing Editor

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Art Editor

Peter Glover

News Editor

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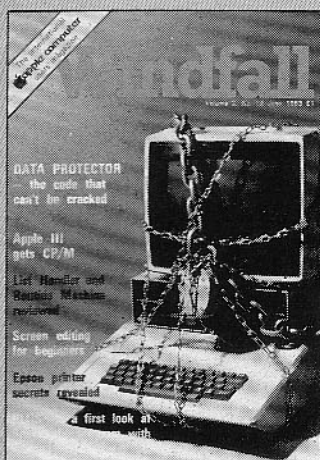
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expressed.

LISTING

17	WHAT'S NEWS ... Inside look at the Apple world
25	THINK TANK A touch more magic ...
29	GAMESMANSHIP Win a spy-type T shirt
34	APPLETIPS They make programming easier
36	MANUALS An easy way to insanity
41	ETHICS To copy or not to copy
44	APPLICATIONS Taking your Apple walkies
47	WILDWORD WP package with a lot to offer
49	HANDLING DATES Aid to database management
50	EPSON Part I Ascii has the answers
53	APPLE CIRCUIT 1.0 Good, but not for beginners
54	FEEDBACK Tackling CHAIN problems
56	VISICALC Super Expander examined
60	GRAPHICS Generating bar indicators
63	COMPUCOPIA The latest software/hardware
69	APPLECART Studying wave formation
72	ANALYSIS Micro DP package reviewed



Vol. 2 No. 12 June 1983

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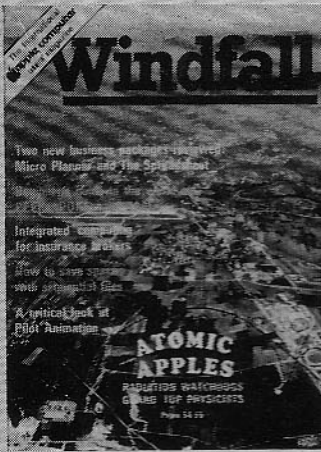
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LISTING

17	WHAT'S NEWS ... Inside look at the Apple world
21	THINK TANK Translating the language card
25	GAMESMANSHIP Playing Pie Man
30	APPLETIPS Stop FID fretting
32	ENCRYPTION DES keeps your data safe
35	APPLE III CP/M Three micros for price of one
38	SAVVY Meet the pondering program
44	LIST HANDLER Follow Santa's example
50	APPLE '83 The Apple event of the year
55	BEGINNERS PLEASE Learn screen editing
56	UNDERSTANDING THE EPSON Talk to your printer
61	BOOK REVIEW Problems with word puzzles
66	BUSINESS PACKAGES APM and Micronet
69	APPLECART User defined characters with Apple Pilot
74	FEEDBACK That cry for help
77	COMPUCOPIA The latest software/hardware
83	ROUTINE MACHINE Open up new Applesoft avenues



Vol. 3 No. 1 July 1983

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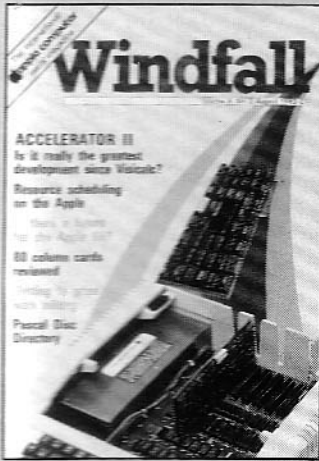
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expressed.

LISTING

17	WHAT'S NEWS Inside look at the Apple world
21	APPLE '83 Big show brings big orders
25	THINK TANK Apple Pascal and Fortran directory
28	APPLETIPS Make programming easier
31	GAMESMANSHIP Wouldn't you rather be Zorking?
35	PROGRAMMING Directing output to the printer
38	MICRO PLANNER Using critical path analysis
40	VISICALC Spreadsheet manual makes heavy going
44	FEEDBACK Hang on to your variables
47	BEGINNERS PLEASE PEEKs, POKEs and CALLs
50	BUSINESS Turnkey makes life simpler
54	CERN Apples in atomic research
56	SPACE SAVER File organisation methods
59	INSURANCE Keeping the competitive edge
61	COMPUCOPIA The latest soft and hardware
69	APPLECART Pilot Animation reviewed
73	DISC DOCTORING A switch will cut costs



Vol.3 No. 2 August 1983

Managing Editor
Derek Meakin

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Peter Glover

News Editor
David Creasey

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LISTING

17 **WHAT'S NEWS...**
A quick look at the Apple world

23 **THINK TANK**
Our forum for programmers

25 **ACCELERATOR**
Tripling the speed of an Apple II

28 **APPLETIPS**
They make programming easier

31 **GAMESMANSHIP**
Our monthly look on the light side

34 **MICRO-PLANNER**
How does resource scheduling work?

40 **APPLE IIe or III?**
Catching the IIIrd wave

44 **VISICALC**
Using indices to make changes

48 **BEGINNERS, PLEASE**
Getting to grips with editing

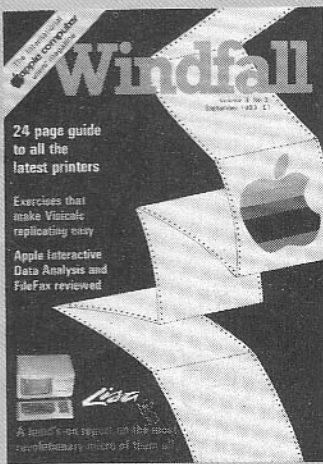
50 **80 COLUMN CARDS**
Two independent offerings for the IIe

52 **FEEDBACK**
Where to find help

55 **APPLECART**
A way through lecture room snags

62 **DISC DIRECTORY**
Accessing disc files from a Pascal program

67 **COMPUCOPIA**
The latest in software/hardware



Vol. 3 No. 3 September 1983

Managing Editor
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Art Editor
Peter Glover

News Editor
David Creasey

Technical Editors
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expressed.

LISTING

17

WHAT'S NEWS ...
Update on the Apple world

21

GAMESMANSHIP
Entrée to advertising

25

LISA
More than meets the eye

34

APPLETIPS
They help make programming easier

37

THINK TANK
Our forum for programmers

40

AIDA
Data analysis package reviewed

44

FILE-FAX
Easy to grasp, fun to use

47

VISICALC
Master the skills of replicating

PRINTERS

**Special Windfall
24 page supplement
starts on page 53**

77

APPLECART
The Apple in education

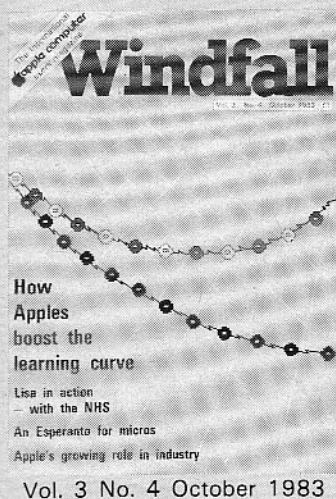
83

FEEDBACK
Two pages to air your views

85

COMPUCOPIA
The latest in software/hardware

LISTING



How
Apples
boost the
learning curve

Lisa in action
- with the NHS

An Esperanto for micros

Apple's growing role in industry

Vol. 3 No. 4 October 1983

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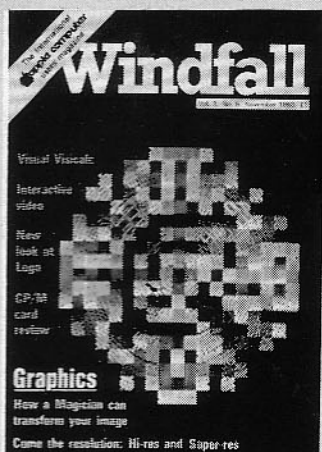
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- | | |
|----|---|
| 17 | WHAT'S NEWS ...
Update on the Apple world |
| 23 | GAMESMANSHIP
Odyssey on the grand scale |
| 28 | APPLETIPS
Take some toil out of programming |
| 31 | THINK TANK
Forum for programmers |
| 34 | EMULATION
Apple's place in industrial control |
| 38 | LISA IN ACTION
Tackling NHS planning |
| 43 | BASICODE
All things to all machines |
| 44 | DIGISOLVE
Professional touch to graphics |
| 48 | VISICALC
Picking horses for courses |
| 50 | FORTH
Powerful version from Metacraft |
| 54 | TRAINING
Six page feature starts here |
| 62 | PACKAGE DEAL
Thinking man's Space Invaders |
| 64 | ABG
Pascal-based business graphics |
| 68 | FEEDBACK
Two pages to air your views |
| 77 | COMPUCOPIA
The latest in software/hardware |
| 83 | AID FOR DISABLED
The door to independence |

LISTING



Vol. 3 No. 5 November 1983

Managing Editor
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Peter Glover

Features Editor
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Technical Editors
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17	WHAT'S NEWS . . . Update on the Apple world
21	THINK TANK Forum for programmers
25	GAMESMANSHIP The Alien - enough to make you scream
30	STYLE How to produce mainframe-type listings
31	INTERACTIVE VIDEO An express route to learning
33	CP/M CARD Versatile, but take care
35	DISC-O-DOC Document debugger disappoints
36	APPLETIPS Take some toil out of programming
38	GRAPHICS Focus on the latest techniques
41	VISICALC Putting it in Apple pie chart order
44	FEEDBACK Two pages to air your views
46	CONTROL Card for the hardware hacker
51	LISA Mainframe link-up
54	HI-RES GRAPHICS Give your text a whirl
63	COMPUCOPIA The latest in software/hardware
69	APPLECART Taking a new look at Logo

Ampersand

- Get rid of unwanted spaces in your listings. **48**

Books

- Picture This Too
- Pascal for the Apple. **23**

Business

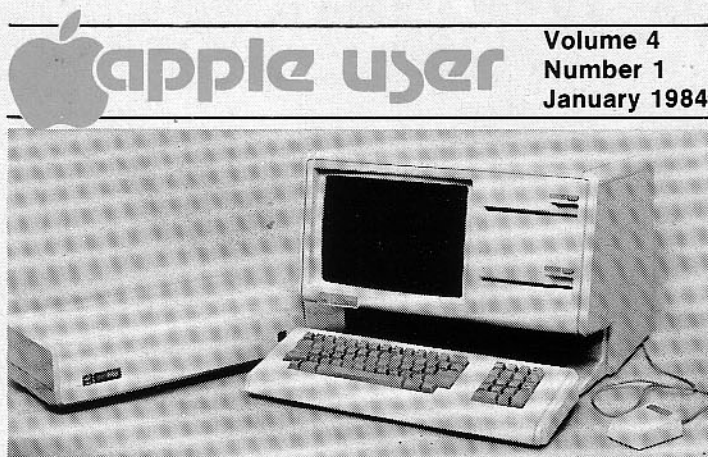
- Briefcase. Introducing a regular column explaining the basics of micro use in business. **29**
- Spreadsheet. Nick Levy takes a preliminary look at Advanced Visicalc on the Apple IIe. **46**

Feedback

- Your letters on faulty ROMs, Ascii Express, HGR co-ordinates, hi-res character generator, printer problems with Appewriter I and Esperanto and other languages. **70**

Games

- Play patience on the Apple. Complete listing. **56**
- Reviews of Apple Cider Spider, Theseus and the Minotaur, Thunderbombs and Buzzard Bait. **62**

**Graphics**

- The Apple comes of age in the world of CAD. Peter Gorry takes a second look at the improved Bit Stik graphics system. **42**

Handicapple

- Bliss Symbols help disabled on a Dutch Apple. **73**

Hi-res text

- Uncover the free hi-res text generator lurking in your System Master. **37**

Lisa

- A Programmer's dream. A look under-the-hood at Lisa's remarkable Workshop software. Part One: File/System/Workshop Management; Basic; Exec Files. **17**

- A second look at Lisa in the National Health. **20**

Logo

- State of the art in America. Christopher Roper brings you up to date with Boxer, word processing, animation and robotics. **39**

News

- Mice and new integrated software packages for the Apple IIe and III. **13**
- A future for Apple as an innovator and market leader? A forecast for the year ahead, the market and the competition - according to Peter Cobb of Apple UK. **14**

New products

- Round up of the latest products on the market for Apple users. **66**

Pascal

- Tutorial. The first in our teach-yourself-Pascal series introduces the language and outlines the structure of a simple program. **34**
- Practical Pascal. Discover PEEKing and POKEing with Jonathon Lewis. **51**

Reviews

- Cheaper peripherals from Taiwan. We examine a 40 column printer, a slimline disc drive, two joysticks... and a light pen built by British schoolboys. **30**
- Delve into the mysteries of the Apple disc with the CIA utility package. It could be a "must" in the Apple user's repertoire. **40**

Technique

- Max Parrott ponders upon programming and learning Assembly language with the Nano 6502. **24**

WP

- How long is that story you've just written on Appewriter II? Count the words with this small routine. **33**
- The Olivetti Praxis 35, Appewriter and the IIe. **61**

Apple User Managing Editor **Derek Meakin** Production Editor **Peter Glover** Features Editor **David Creasey**
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Books

- We review a series of books from Usborne which cater for a wide range of newcomers and are particularly suitable for children. 29

Business

- How a British clothing manufacturer and retailer used an Apple II to help decide on a £4.25 million takeover bid. 24
- Nick Levy continues his discussion on developing a cash flow model with Visicalc. He also shows the value of @ISERROR 58

Darts update

- Many people have played darts on the Apple using our listing published in March 1983. This routine gives voice to your darts game. 50

Feedback

- Your letters on failed keyboard keys, our Patience listing, the ALS CP/M Plus card, and on problems with Applewriter II, the RND function and an 8in disc drive controller. 70

Games

- Reviews of The Quest (an adventure game with more than one route to the solution),

apple user

Volume 4
Number 2
February 1984



Macintosh, the mighty mite

- Story Machine (instant authorship for children); Repton (probably the best defender game yet on the Apple) and Sammy Lightfoot (the daring young man on the trapeze, trampoline and other hazardous equipment). 42

Graphics

- Develop your own library of integrated graphical routines. Peter Gorry explains the basic considerations to take into account in designing such a system. 40

Lisa

- Mike Glover concludes his article on the Lisa Workshop software with a look at the Pascal and Quickdraw packages. 37

Logo

- Looking at Lists – and

- Logo's power for manipulating languages. 33

Macintosh

- The next best seller in the Apple range. We give full details and first impressions of the remarkable new micro that is inexpensive, powerful and refines the revolution that was embodied in Lisa. 17

New products

- Round up of the latest products on the market for Apple users. 66

News

- Apple and Franklin settle their differences; more lookalikes slip through the net; price war imminent? 13

Pascal

- Produce animation with Pascal – Jonathon

- Lewis shows you the technique. 56

- Tutorial, Part II. Extensions, conditional and compound statements, Begin-End pairs, loops and examples of nested statements/conditions. 53

Pro DOS

- A new operating system for the Apple II which will replace DOS 3.3 and give the Apple II much closer links with the Apple III. The first of two articles by Keith Lander. 30

Technique

- Manipulate dates within programs using two algorithms from Max Parrott and a date conversion routine listing from Basil Shall. 47

Reviews

- Bank Street Writer: A word processor aimed at and suited to the educational market. 61
- Keystar. Linked to the Apple II via a serial card, this peripheral provides a simple way to enter commands using the WordStar program. 65
- Word Weaver: A poor WP program for the Apple III – but it provides an interesting example of how not to write and present software. 73

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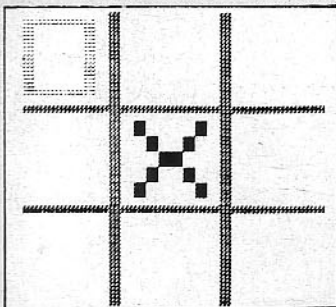
Business

- Spreadsheet. Print out your Visicalc models sideways! Nick Levy reviews a South African program called Sidevise. **40**
- Vic Tann looks at project planning using critical path analysis and Visicalc. **41**

Feedback

- Your letters on disabling the re-set key; compatibility between Advanced and Ordinary Visicalc; animated use of the HGR pages. **50**

Games



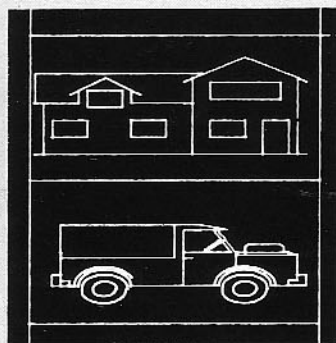
- Noughts and Crosses – the complete listing. **17**
- Reviews of Police Artist, Facemaker, Microbe, Adventure in Flesh and Dungeon. **24**
- Twenty Questions. Use our listing for "non-object" code (or cheating at parlour games). **12**

apple user

Volume 4
Number 3
March 1984



Graphics



- Peter Gorry presents two histogram routines to add to your integrated graphical library. He also shows how to move a program past the graphics page. **32**

Lisa

- Lisa moves into second gear with the release of three new models and a drastic reduction in price. **39**
- Herman Bruce of Systems Union describes his company's full ledger accounting system, SunAccount. **31**

Micro pop

- Apples take to the stage in a marriage of programming and pop music. **21**

New products

- Round up of the latest products on the market for Apple users. **55**

News

- A portable IIe on the horizon; mice invade Apple IIe and III; Lisa scoops top award. **9**

Pascal

- Tutorial, Part III. Numbers aren't everything – you need to know how to handle names and addresses, questions and answers and so on. Gordon Findlay discusses Pascal's string handling capabilities. **28**

Technique

- Max Parrott shows how to index Forth program discs. **37**

Reviews

- Incredible Jack, a three-in-one word processing, calc analysis and record retrieval program. **45**
- Studentdata, a global administration package for schools. **22**

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Apple '84

● All the latest on next month's star-studded Apple exhibition. **12**

Business

● Spreadsheet. Nick Levy sees who'll benefit from TK! Solver. **18**

Books

● Reviews of Visicalc for the Apple II Plus and The Elementary Apple. **65**

Feedback

● Your letters on the economics of using spreadsheets; Incredible Jack; Patience problems. **66**

Games

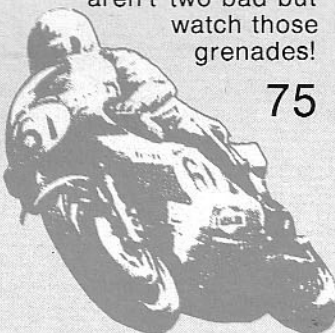
● Reviews of Wizardry III, The War of the Samurai and The Spy Strikes Back. **54**

apple user

Volume 4
Number 4
April 1984



● Speedway. Put your riding skills to the acid test with this easy-to-list game. The oilslicks aren't too bad but watch those grenades! **75**



Graphics

● Peter Gorry's guided tour round the plotting instructions maze. **24**

Introduction

● John Vann tells how the Apple bug bit **53**

Macintosh

● We report the big response to the launch of Apple's latest micro. **21**

News

● Six senior Apple men disappear; robots roll out the Macintoshes; and those cooking Apples. **9**

New products

● Expert eye on the latest products on the market for Apple users. **79**

Pascal

● Our tutorial looks at WHILE loops and introduces Boolean variables. **35**

Reviews

● Peter Ashford looks at a batch of parallel printer cards to speed printout production. **70**

● Get through a page faster with Rapid Reader. **19**

● Christopher Roper compares two word processing packages. **28**

● Keith Lander concludes his review of ProDOS. **30**

<table border="1"> <tr><td>Main system ROM and RAM</td><td>Approach</td><td>\$3000</td></tr> <tr><td>Peripheral ROMs</td><td>System I/O</td><td>\$1000</td></tr> <tr><td>System gloves (\$5000 \$1000)</td><td>Available to system prog</td><td>\$1700</td></tr> <tr><td>System prog loaded here</td><td>Available to system prog</td><td>\$6000</td></tr> <tr><td>Text screen I</td><td>Zero page stack, input buffer</td><td>\$2000</td></tr> </table>	Main system ROM and RAM	Approach	\$3000	Peripheral ROMs	System I/O	\$1000	System gloves (\$5000 \$1000)	Available to system prog	\$1700	System prog loaded here	Available to system prog	\$6000	Text screen I	Zero page stack, input buffer	\$2000	<table border="1"> <tr><td>Language card RAM</td><td>ProDOS MLI</td><td>ProDOS MLI</td></tr> <tr><td>Alternate \$2000 RAM card bank</td><td>ProDOS MLI</td><td>Free</td></tr> </table>	Language card RAM	ProDOS MLI	ProDOS MLI	Alternate \$2000 RAM card bank	ProDOS MLI	Free
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Technique

● Save your secrets with Jonathan Lewis's encoding programs. **60**



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Apple '84

- Europe's biggest and best Apple get-together. Find out who will be there and how to join them. 11, 32

Appleworks

- We preview the three-in-one integrated program that Apple believes will rival Visicalc in popularity. 17

Comment

- Keeping up with the children – or how Granddad became an Apple owner. 29

Cover story

- Enter Apple's newest micro. An exclusive report on the Apple IIc, a transportable 128k machine with a half-height floppy disc drive and a lot of other extras built-in. 39

Feedback

- Your letters on ITT2020 compatibility, leap year lapses, mixing graphics and text and problems with colour. 66

Games

- Reviews of Missing Ring (a marathon



The new Apple IIc

adventure with no guarantee of success), Color Me (hi-res colouring for kids), and Black Death (the scourge of the 14th century on an Apple). 44

- Listing – Apple Raid. A maze chase that takes you scrumping in the 21st century. 58

Graphics

- Peter Gorry discusses 3-dimensional surface pictures – or how to ensure the Apple doesn't draw lines you shouldn't see! Also reviews of Paper Graphics and Transitions, two graphics packages from Penguin. 34

Lisa

- Fledermaus – a new,

ingenious mapping tool for the Lisa mouse. 22

Macintosh

- A software company explains its involvement with the Sand Project – part of the early development work on Macintosh. 56

New products

- Summary of the latest products on the market for Apple users, including four new database management systems. Omnis 1, 2 and 3 from Blyth, and Keystrokes from Brock Software Products. 69

News

- Macintosh sales top 50,000 . . . Apple and

the Office of Fair Trading . . . how Apple plans to purge the look-alikes in Britain. 9

Pascal

- In our tutorial Gordon Findlay discusses CHOICE/CASE, a powerful alternative to a succession of nested IF statements. 53

Programming

- Use DOS from within Basic. 24

Reviews

- Ultraterm – a powerful display card for the Apple II that can give you 132 columns x 48 lines. 47
- MEM/DOS – a versatile French operating system on a plug-in card. 51

Spreadsheet

- Nick Levy takes a second look at Multiplan (and how the Xternal command makes up for memory restrictions). 26

WP

- Putting Applewriter's Word Processing Language to work. 60

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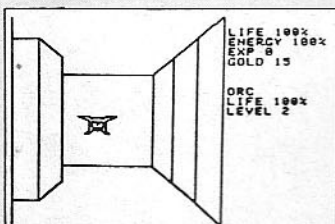
Education

- An unusual approach to marking school work from Gilbert Dispaux. 61

Feedback

- Your queries, problems and opinions from faster file access to decoding morse and disabling an 80 column card when using Pascal. 74

Games



- Cliff McKnight looks over the home grown talent in the Apple games market. 55

Graphics

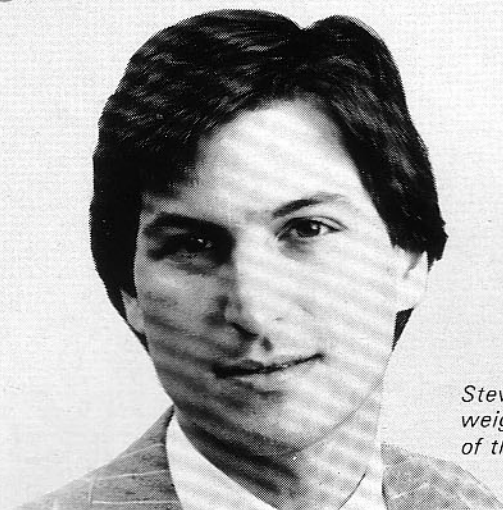
- Peter Gorry takes some of the terror out of producing hi-res text. 36

In touch

- Introduction to the rapidly expanding world of computer-to-computer communication. 58

apple user

Volume 4
Number 6
June 1984



Steven P. Jobs... weighs up battle of the giants

Jobs talks

- Apple boss gives an exciting in-depth interview outlining the company's future plans. 20

Logo

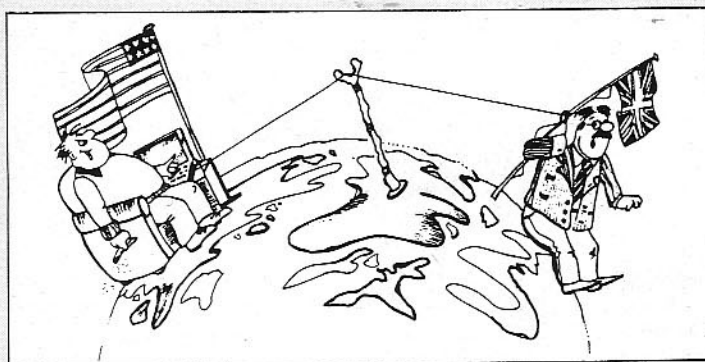
- Christopher Roper looks at two new utilities, a sample program disc and a toolkit. 77

News

- Apple IIc sales soar... and Macintosh wows the USA... Sony and Apple share hard disc technology. 15

New products

- Summary of the latest products on the Apple scene. 79



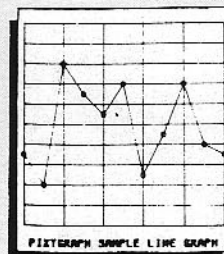
Pascal

- Tag along with a turtle in Part VI of our tutorial. 27

Programming

- Mike Salem in search of an arbitrary byte dump. 33

Reviews



- Pixy, a low cost multi-pen plotter. 69
- Track Ball, a sort of upside down mouse and the C/PW colour modulator. 71

Spreadsheet

- Nick Levy investigates formula swapping with that often neglected @LOOKUP function. 44

WP

- Word Finder. Geoff Wood shows how WPL can be used for solving and compiling cross-words. 48

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CAD

- Paul Nicholson gives an architect's appraisal of Capitol, a computer aided design package for the Apple II. **36**

CP/M

- Automating CP/M with a pseudo disc drive.
- Bringing the Epson printer under the full control of Wordstar. **30**

Database

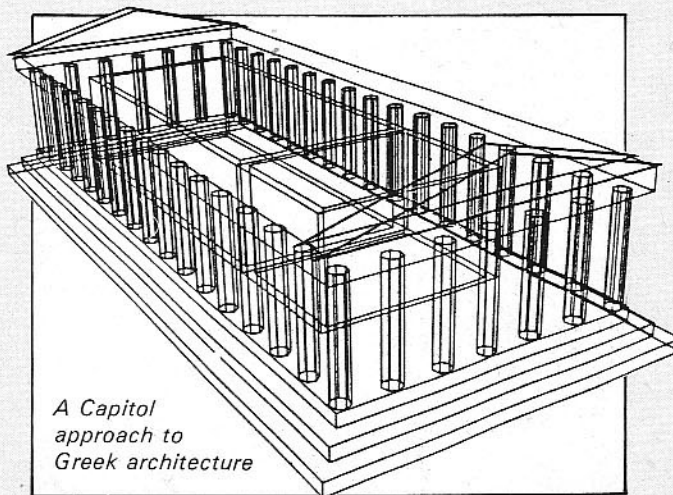
- Nick Levy turns aside from his regular look at spreadsheets to delve into the finer points of relational databases. **33**

Feedback

- Your letters on TK! Solver problem posers; printer tabbing; name changes; Patience gaming; and learning assembler – with a request for details of your own assembler. **66**

Games

- Reviews of Lode Runner (a more addictive version of the classic Apple Panic game), The Coveted Mirror (a value for money adventure game), Crypt of Medea


apple user


(a standard adventure with few variations in format) and Queen of Hearts (an addictive and above average pin-ball simulation). **16**

- Listing: Roger Gilbertson (of Patience fame in the January issue of Apple User) presents a listing for a do-it-yourself general purpose quiz. **57**

Graphics

- Screensplicer, with French author Ricardo Ettore showing how to display two hi-res pictures side by side on the Apple screen. **39**
- Peter Rickwood tackles problems with

super-res graphics on the Apple IIe. **43**

NOTE: Part VI of Peter Gorry's regular column "build your own graphics package" will appear next month.

Lisa

- The variable text sizes created by Lisa can help people with poor or failing eyesight. Charles Fairfax tells you how it's done. **49**

New products

- A summary of the latest products on the Apple scene. **63**

News

- A £2 million advertising campaign for Macintosh in Britain; full report on Apple '84, Europe's biggest Apple get-together; and how an American's quest for an Apple IIc took him to Slough. **9**

Pascal

- Gordon Findlay discusses defining procedures in Part VII of our Pascal tutorial. **53**

Review

- Apple's integrated program Appleworks (or 3EZ Pieces on the Apple III) passes muster under the critical eye of Mike Glover. **22**

Sound

- Keeping the peace with an Apple. Our Australian contributor Peter Rickwood explains how to turn down the volume on your micro. **20**

Visicalc

- Vic Tann shows how to calculate the cost of mortgage repayments. **13**

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Applications

- How an Apple has helped run a haulage company. **59**

Books

- Hugh Dobbs casts a critical eye at a self-teaching guide to data-file programming. **62**

CAD

- David Haughton has a look at Scribe, a 3-D CAD package for the Apple IIe. **54**

CP/M

- Neville Ash reviews a single-disc accounting system for the Apple II. **32**
- Pitfalls of the Super-file database system are explored by Roger Heron. **57**

Feedback

- Your letters requesting help on the Apple IIe and Epson printer, solving TK! Solver powers using Visicalc, requesting a teletext adaptor for the Apple II, more on Epson codes and how to enter a full string length of 255 characters from the keyboard. **66**

apple user

Volume 4
Number 8
August 1984

Communications

- Peter Tootill describes the Bulletin Board system and Quentin Reidford continues his series with an explanation of some of the hardware requirements. Four pages aimed at getting Apple users communicating. **39**

**Games**

- Thoughts on desirable features of games plus reviews of Plasmania (an arcade version of the Fantastic Voyage film), Bouncing Kamungas (a contender for Silly Game of the Year), and Pinball Construction Set (for DIY pinball addicts). **17**

Graphics

- Part VI of Peter Gorry's regular "build your own graphics package" section. **26**

Lisa

- Charles Fairfax and Geraldine Howe show how Lisa can streamline

meetings and reduce paperwork. **29**

New products

- Summary of all the latest products on the Apple scene. **69**

News

- New head of operations for Apple UK, how to learn American football, Apples helping in medical research, how Taiwan is dealing with the copycats, and we take a creep around the atomic energy labs. **9**

Pascal

- P.H.P. Harris shows how to make the most of the Pascal assembler. **44**

Reviews

- Don Morrison tries out a popular program generator. **36**
- A Ramdrive for the Apple IIe gets the Peter Gorry treatment. **51**
- Max Parrott takes some short cuts with a utility package. **52**

Speech

- Martin Keeson tests out the Voice Input Module. **24**

**Spreadsheet**

- An unusual use of Multiplan helps John and Jonathan Nixon keep track of some sporting averages. **34**

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Application

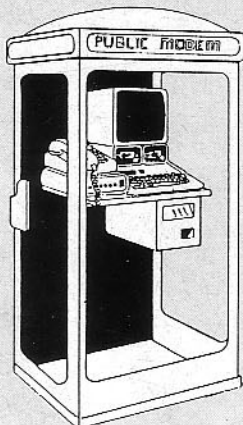
- How an Apple is helping PC Philip Olds to walk again. **59**

Books

- Jason W. Smith gives a correction to a best-seller on graphics. **50**

Comms

- The advantages of serial data transfer, as seen by Robin Hudson. **47**



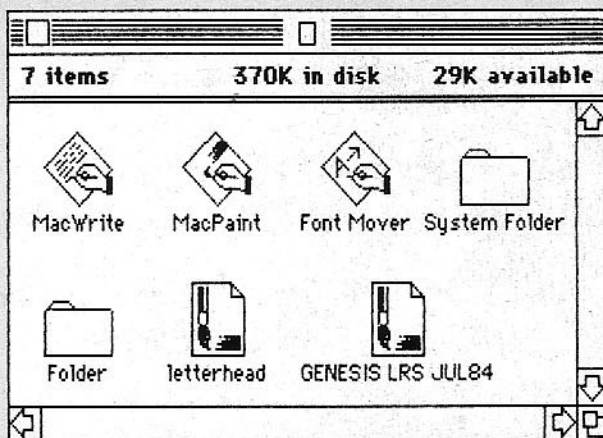
- Don't miss Apple User's money-saving communications package offer **49**

Feedback

- Three pages of your letters on using the back of discs, problems with Darts, Big Mac, decoding Morse, and lots more. **62**



Volume 4
Number 9
September 1984

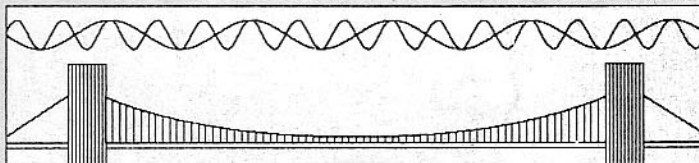


Games

- Cliff McKnight improves his education with a music tutor and two home education packages. Douglas Strathdee tries his wizard's wand at Hallowe'en, a pumpkin-coloured arcade game. **17**

Graphics

- Part VII of Peter Gorry's DIY graphics package, including a review of Doublestuff for the Apple IIe. **26**



Macintosh

- Six pages devoted to Apple's 32 technology stable, with Roger Bowns praising the word processing power of Mac, Nigel Hearne on Mac software development, Cliff McKnight playing Transylvania with a mouse, and Charles Fairfax and Tony Parsons linking Lisa to an ICL mainframe. **39**

New products

- All about the latest

products to enhance your Apple. **70**

News

- Trouble in The Street... Apple sells well, gives them away, sues too, and plans to invade Russia... down-loading of software... and more. **9**

Pascal

- Gordon Findlay continues his tutorial series with a look at functions. **33**

Pilot

- Gordon Mills gives a full Basic listing of a mini-Pilot interpreter for you to try. **24**

Spreadsheet

- Nick Levy shows how Visicalc can be taught to think for itself and Patrick O'Beirne reports on a bug in the Advanced Version of Visicalc. **22**

Reviews

- Keith Williamson extols the virtues of Graphpak, a suite of programs for the engineer and scientist. **54**
- Nevill Ash looks at the new enhanced version of Format-80. **69**

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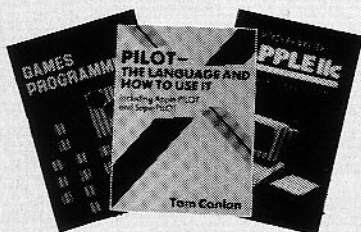
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Appletips

● Drive-cleaning, DOS-dabbling, Remarkable REMs and bizarre listings. **40**

Application

● Osia Koranteng tells how Apples are improving efficiency in a clothing factory. **30**



Books

● Reviews of books on games programming, Pilot and the Apple IIc. **44**

Feedback

● Macintosh - the good and the bad, Apple II family compatibility, protection, encryption ... and much more. **64**

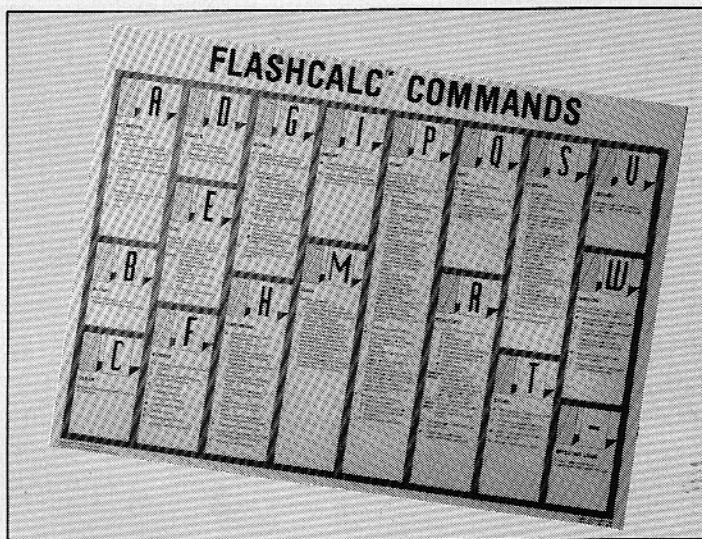


Games

● Cliff McKnight goes into space with the



Volume 4
Number 10
October 1984



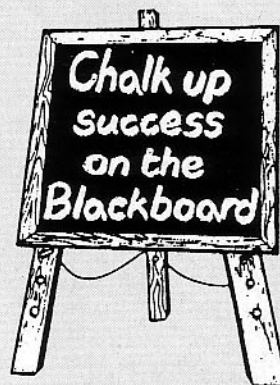
News

● Hemel shake-up ... Fat Mac arrives ... MEM/DOS relaunched ... tax man challenged. **5**

Pascal

● Gordon Findlay's tutorial series continues. **42**

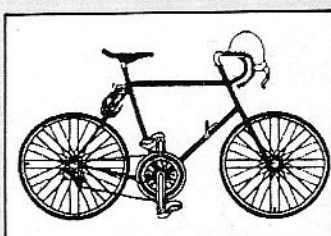
Reviews



● Max Parrott has a busy time with the Blackboard printer card ...

... and the CW/P Waterbell disc drive. **60**

Macintosh



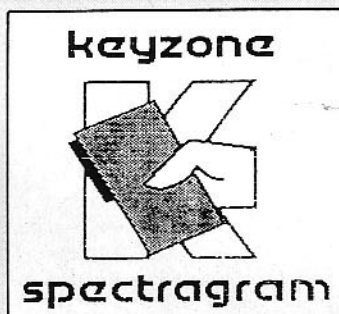
● Eugene Evans finds MacForth the answer to his problems, while Cliff McKnight uses Click Art and Mac the Knife to make up for his lack of artistic ability. **33**

New products

● Three pages of ideas on how to spend your money. **56**

Gruds, makes a fortune discovering oil and loses it on a one-arm bandit. Julian Brewer blasts away at Aquatron. **15**

Graphics



● Part VIII of Peter Gorry's Graphics package, including a review of the Spectrogram colour card. **50**

Simulations

● Dave Miller offers programs to simulate radioactive decay and Einstein solids. **48**

Spreadsheet

● Nick Levy looks at Flashcalc, the latest offering from VisiCorp. **20**

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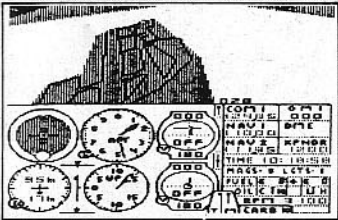
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News

● The Apple Higher Education Consortium, Iceland warms to Symbfile, Macintosh Software, and more.

9

Games



● Off into the wild blue yonder with John Jones and Flight Simulator II, while Cliff McKnight looks at Drol and BC's Quest For Tires.

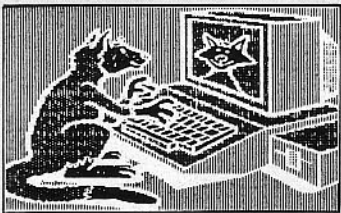
17

Education

● André Wagstaff tells about the effect an Apple had on a primary school.

23

Graphics



● Part IX of Peter Gorry's DIY package, including a review of the Penguin package Cat Graphics.

26



Volume 4
Number 11
November 1984

A Christmas Adventure

● Don't miss Apple User's great offer of a very special Christmas game. 33



You are in the office. Time to get down to business. You see a computer.

Pascal

● Gordon Findlay leads you gently into the Pascal operating system.

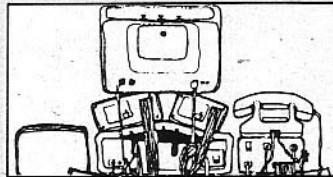
34

Macintosh

● Mike Glover takes a look at four language packages for the Mac and two of the recent spate of Mac books are reviewed.

37

Comms



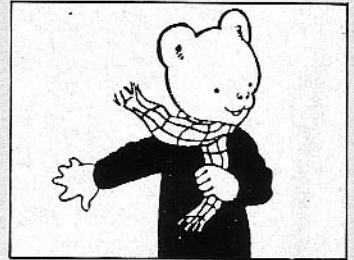
● Quentin Reidford continues his series with a look at software.

46

● Apple User repeats its unbeatable communications package offer.

49

Reviews



● Ralph Clarke looks at Digisolve's Pixel Paint.

53

● Michael Falter works out his wages with Hilderbay's Payroll package.

54

DOS Toolkit

● P.H.P. Harris shows how to load assembler modules onto a language card.

57

Feedback

● Problems with Applewriter, hi-res text, Mac Mouse Paint - three pages of your letters.

62

New products

● CAD for the Apple II family, LOGO for the Mac, XENIX for Lisa, and many more ideas on how to spend your money.

69

Order form

● Need any back issues? binders to keep them in?

76

Apple User Managing Editor **Derek Meakin** Features Editor **Cliff McKnight** Technical Editor **Max Parrott**
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News

● A nail-biting time for Apple bosses as they wait to gauge the effect of the big end-of-year sales push. The first look at Moscow's new red Apple. How to use a Macintosh to design tiles and record covers. **5**

Interview

● Apple boss John Sculley talks about the company's plans for 1985 - including a big push on the office market. **12**

Games

● How to get youngsters involved in adventuring with Gelfling Adventure and to write their own stories with Story Maker. And we battle through seven star systems with Stellar 7. **15**

Application

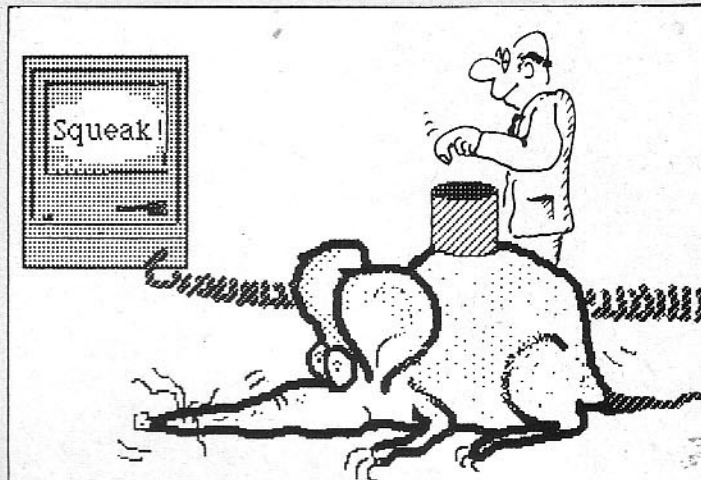
● The Apple is one of the most popular micros with farmers. An ex-president of the NFU tells why he's an Apple user. **19**

Education

● We take a look at Clozemaster, an Apple package based on the Cloze method of teaching. **21**



Volume 5
Number 1
January 1985



A Macintosh romance

● TV reporter Peter Sharratt tells what the arrival of Macintosh has meant for him - and the fun he has with Macpaint. **36**

The 6809

● Part II of Cornelis Bongers series on the 6809 processor in which he explores the Flex operating system. **30**

Hardware

● What is the relationship between the Apple II and the ITT 2020? We look at their similarities and differences. **43**

Reviews

● A non-accountant sums up the Ormbeta Compact Accounting System. **49**
● We test drive the CGL half-height disc drive. **57**

Compatibility

● What Apple II software also runs on the IIc? We list some programs that work on both machines - and some that don't. **51**

Pascal

● We illustrate a technique to determine the addresses of procedures and variables in UCSD Pascal and its 6502 Assembler. **53**

Feedback

● An Israeli Mac user seeks help. A bug is found in the Apple IIc. Problems with ProDOS. An Apple that sees double. How to create a new cursor. **58**

Comms

● Another chance to join the communications revolution with our bargain offer of a modem and software package. **60**

New products

● They're all here - joysticks, business packages, fans, typing tutors, printer interfaces, CP/M cards, educational software and a graphics library. **63**

Order form

● Here's where you can take out a year's subscription to Apple User, get your back numbers and binders, or indulge in necklaces and ties. **69**

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News

● GEM doesn't sparkle for Apple; after the Big Mac - the giant Mac; Apple blamed for Acorn's US slump; and more. **5**

The Woz

● If you have ever dreamed of a 16 bit Apple II, read what the Wizard of Woz has to say about it. **9**

Survey

● Take time to fill out our survey, and don't forget to send it back to us. You may be one of the lucky 10 to win a year's free subscription. **12**

Quicksort

● It's Forth v Basic in Colin J. Davies' look at the Quicksort method. **17**

Games

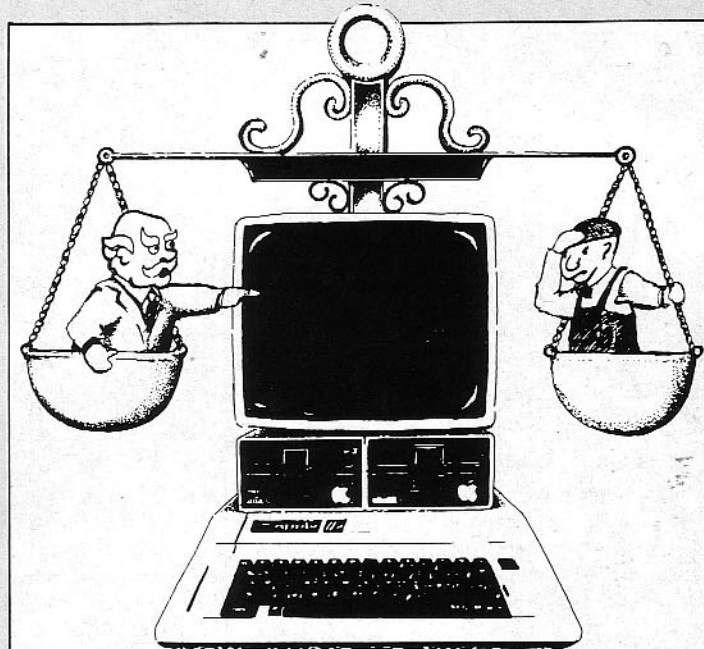
● Adventure games galore with Julian Brewer's Infocom update and Gill Reeve's expedition up the Amazon. **19**

Graphics

● Part XI of Peter Gorry's DIY package takes a first look at shape tables. **23**



Volume 5
Number 2
February 1985



Conflict resolution?

● Can an Apple II program really resolve the miners' strike? **26**

Spreadsheet

● Patrick O'Beirne tells how to drive your spreadsheet in reverse. **30**

File transfer

● Roy Copping tells how the Qatar police transfer Basic, text and binary files between Apples. **32**

Lisa

● Charles Fairfax and Kathryn Carr describe how complex chemical formulae yield to Lisa's charm. **35**

Macintosh

● Two more of the recent spate of Mac books reviewed. **38**

Review

● Neville Ash tries to psych out the opposition with some Human Edge software. **45**

The 6809

● Cornelis Bongers concludes his series with a look at the OS-9 operating system. **46**

Application

● Two different ways to Apple-assisted book production, as described by Graham Keeler. **51**

Feedback

● Your thoughts on ProDOS, VisiCalc, games software, Apple II series compatibility, and more. **55**

New Products

● From gardening to dentistry, jogging to architectural design, new products to capture your imagination and cash. **61**

Programming

● Give your programs a split personality with P.H.P. Harris's useful routine. **65**

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News

● French snub to the Apple, Lisa re-named, taking an Apple IIc to Everest, and more.

5

Programming

● Kevin Farrell explores the best methods of going round in circles.

10

Pilot

● Brian Rushton shows how the System Log can help with analysis of student progress.

15

Reviews

● The Editor gets the blue pencil treatment from Peter Gorry.

17

● Hugh Dobbs looks at three educational packages.

19

Spreadsheet

● Vic Tann turns a Visicalc disadvantage to your advantage.

26

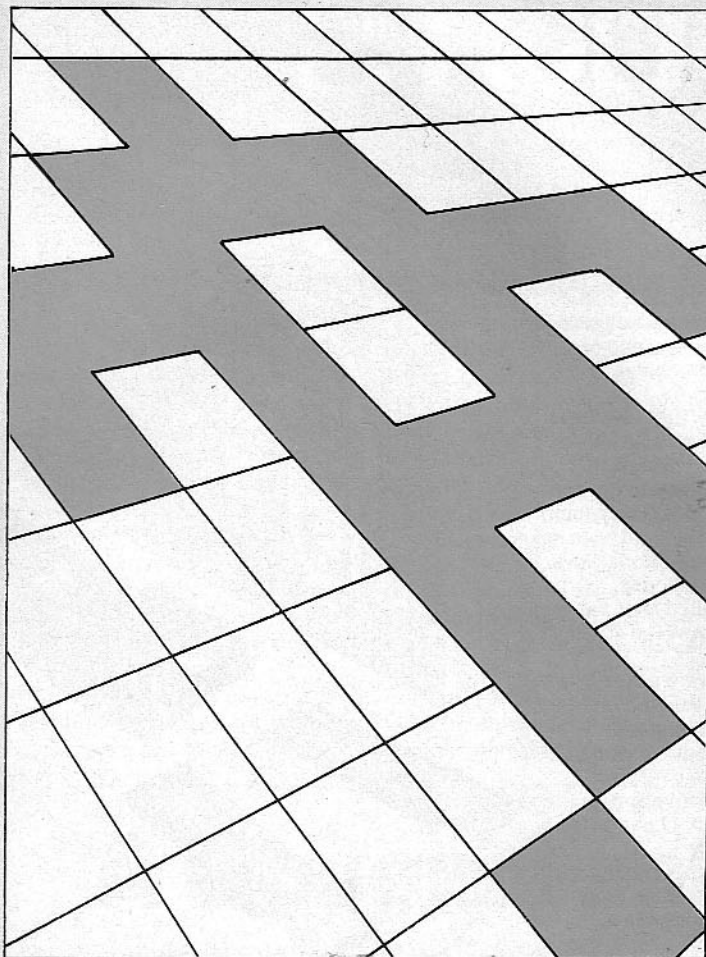
Application

● Harry Moore outlines a competitive estimating system built on an Apple/Multiplan combination.

28



Volume 5
Number 3
March 1985



A superb shape table builder and editor comes free with Part XII of Peter Gorry's Graphics Library, starting on Page 20.

Editing

● Use Keith Nelson's routine to improve your Apple's editing facility.

29

Macintosh

● MacTerminal gives Bill Hill a window on the world.

35

● A book, a game and an alternative mouse keep Cliff McKnight busy.

37

Hardware

● The Merl modem card, as seen by Quentin Reidford.

42

● The Intec 505 hard drive, as seen by Neville Ash.

45

● The Vision 128/256 card, as seen by Peter Wilson.

52

Fun & Games

● Xyphus plus Fighter Command and Picture Writer keep our intrepid reviewers busy this month.

47

Feedback

● More about ProDOS, new user groups, the paranormal . . . all your letters.

55

New products

● Ideas on how you can spend your hard-earned cash.

61

Classifieds

● Bargains galore from your fellow Apple users.

67

Order Form

● Subscriptions, back issues, binders to keep them in, something to put round your neck.

69

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Apple '85

● Make a note in your diary. Don't miss the biggest Apple event of the year.

4

News

● Apple announces big price cuts for education, Hungarian Apple holiday camps, London Festival of Computing, and more.

5

Special Offer

● We're offering free membership of Telecom Gold, normally costing £115.

7

Application

● Apples ease the pain of dental administration.

10

Graphics

● Could Gorrysoft take over from Basic? Peter adds two new commands - you could add more.

18

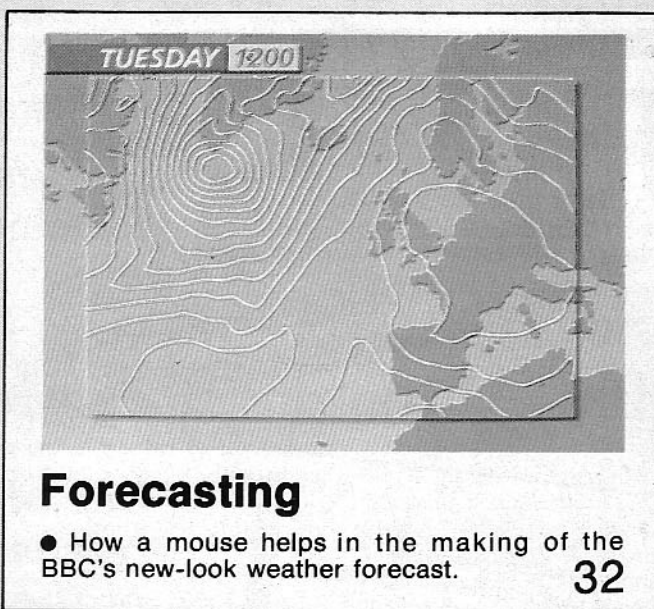
Programming

● Andy Beveridge uses the VBLANK signal to good effect.

25



Volume 5
Number 4
April 1985



Forecasting

● How a mouse helps in the making of the BBC's new-look weather forecast.

32

Starting Out

● You won't go far wrong if you follow this route to software use.

30

Reviews

● Max Parrott accelerates with the Speedemon card.

17

● Chris Burrige looks at PFS File/Report on the Macintosh.

34

● W-P-LAB for the Applewriter with form letters or mail-shots to produce.

38

Competition

● Don't miss this chance to win a bumper software bundle, courtesy of Pitman Publishing.

40

Pascal

● Steve Franks shows how to access the File's D command.

42

Fun & Games

● Cliff McKnight pursues the trivial and Tim Shreeve designs his dream home.

47

Survey

● If you filled in our survey form, you could be one of the ten lucky winners.

48

Classifieds

● Bargains galore from your fellow Apple users.

50

Books

● Reviews of books on Appleworks, VisiCalc and machine level programming.

52

Feedback

● Setscreen correction, Speedway additions, ITT Jailbreak substitutes, and more.

55

New products

● Plenty of ideas on how to spend your money.

60

Index

● Better late than never, an index to Windfall volumes 1 and 2.

68

Order Form

● Subscriptions, back issues, binders to keep them in.

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News

● Big European crack-down on counterfeit Apples, Hebrew word processing, colour display for the Macintosh, and more. 5

Apple '85

● Don't miss the biggest Apple event of the year. Read all about it on Page 9. Then turn to Page 15 for your free ticket. 9

Graphics

● In Part XIII of the Apple User Graphics Library, Peter Gorry shows how to create pie charts. 10

Sports

● If you're tired of writing race results, Peter Popham's suite of programs will make Sports Day run smoothly. 18

Reviews

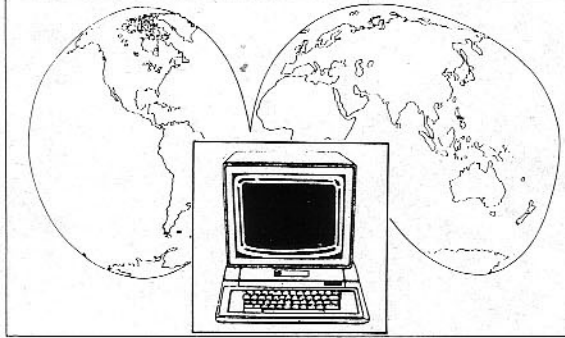
● Malcolm Whapshott works out on the Workbench, the improved DOS Toolkit. 17

● Robbie McLaren gives an account of Macputer IIc. 21

● Max Parrott writes to the hi-res screen with Copytext. 26


apple user

Volume 5
Number 5
May 1985

**Introducing MicroLink**

● Join MicroLink, the exciting new micro communications system tailored to your needs. Full details of the service and the facilities it offers, can be found in the centre pages.

Macintosh

● Chris Burrige concludes his comparative review of Omnis 2 and PFS File/Report. 24

Programming

● Michael King tells how to use the RWTS to advantage, and D. Poirier demonstrates it with a useful disc verifying routine. 29

Pascal

● Gordon Findlay on how to access the directory from within a Pascal program. 36

Protection

● Use Chee Wei-Li's routines to protect your programs from Copya. 44

Timer

● Test your reactions with Frank Mallett's timer program. 47

Searching

● Colin Davies implements the binsearch algorithm in Forth and Basic. 50

New products

● Lots of ideas on how to spend your money. 52

Books

● Turn turtle with these seven Logo books. 58

Application

● Laszlo Koranyi gives an update on the Hungarian Apple scene. 60

Feedback

● Recovering deleted Pascal files, Speedemon on Ice, 80 columns without a card, and more. 63

Classifieds

● Bargains galore from your fellow Apple users. 69

Fun & Games

● Shopping, gardening, cooking – Denise McKnight looks at some software for the housewife of the future. 70

Index

● Bringing us up to date, an index of Apple User volumes 3 and 4. 74

Order form

● Subscriptions, back issues and binders. 75

Apple User Managing Editor **Derek Meakin** Features Editor **Cliff McKnight** Technical Editor **Max Parrott**

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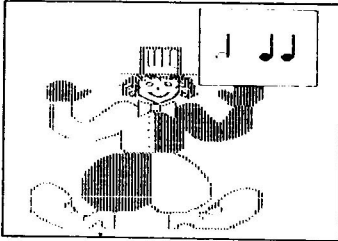
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News

● Atari's threat to Macintosh, how an Apple IIc survived the ascent of Everest, North Sea gas monitoring, Royalty takes a hand, and more.

5

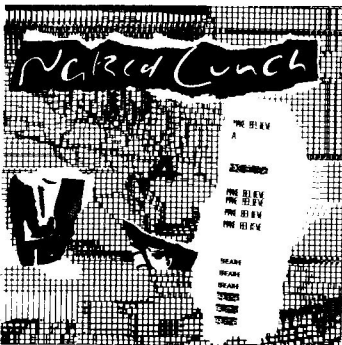
Fun & Games



● The Music Construction Set, Song Writer and Music Readiness keep our reviewers busy and provide the fun and games this month.

9

Application



● Michael Brice gives an insight into how Apples help keep track of five music companies.

17

Make Mine Music

● 1985 is European Music Year so this month we're making our contribution with hardware, software, applications and reviews

Pascal

● Stuart Bell begins a new series of Pascal Tutorials with a look at records - but not the musical kind.

19

Macintosh

● Bill Hill demonstrates his versatility on the ivory key-caps with Musicworks.

30

Review

● Kevin Farrell looks at Tick-Tack, a useful translation package for foreign correspondence.

25

Graphics

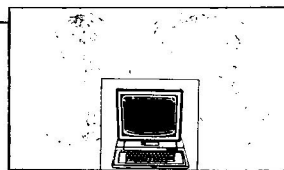
● Peter Gorry takes time out from programming the Apple User Graphics Library to review three books on graphics.

39

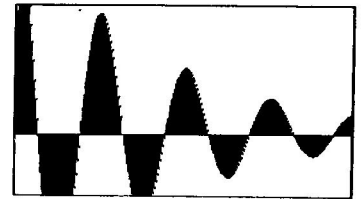
MicroLink

● Your chance to join MicroLink, the new micro communications system tailored to your needs.

34



Mugraph



● It's surprising what you can do with a light dependent resistor. Jim Dawson shows you how.

44

Programming

● Mark Bowyer gives an ampersand route to music and sounds in your own programs.

49

Feedback

● Connecting a Koala pad to an Apple IIc, single drive Pascal, screen output in Pascal, and more.

53

New Products

● A small sample of the newest ways to spend your money.

62

Order form

● Subscriptions, back issues, binders to keep them in.

66

Classifieds

● Bargain offers from your fellow Apple users.

70

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News

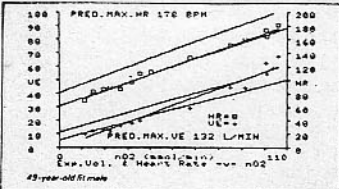
● Asian pirates finally clone the Apple IIe, Macintosh network run by an Apple IIe, and more. **5**

Fun & Games



● The accent's on cut-price adventures this month, plus a look at Adventure Writer for the DIY enthusiast. **9**

Application



● Apples at the heart of the Pulmonary Function Laboratory in Papworth Hospital. **17**

Pascal

● Stuart Bell continues his series of Pascal Tutorials, using files of records to handle large volumes of information. **19**

Utility

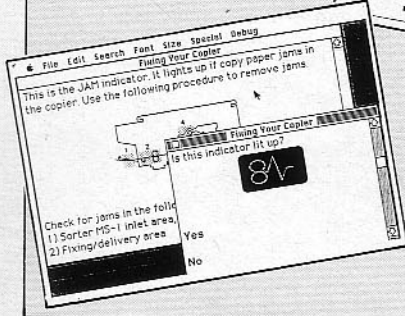
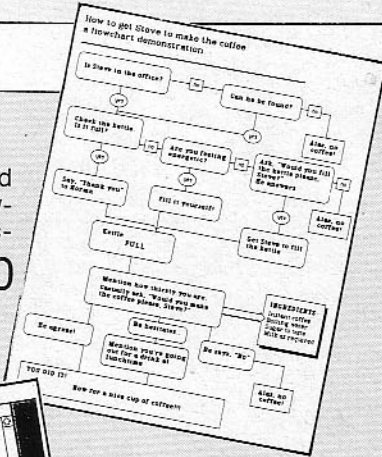
● Reassign the default load address of binary files with this useful routine. **22**



Volume 5
Number 7
July 1985

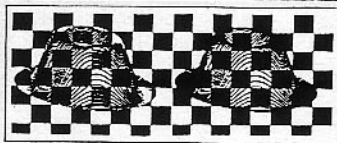
Macintosh

● Duncan Langford shows how easy flow-charting is with MacPaint. **40**



● Bill Hill gets a sneak preview of Guide, a powerful package tipped to become the next Filevision. **39**

Review



● Bill Allen compares Thirdware's Finger Print with Dark Star's Printinterrupt. **24**

MicroLink

● Your chance to join MicroLink, the new micro communications system tailored to your needs. There's full details of what this newly-opened service offers Apple users, together with an application form. **34**

Programming

● Use that extra memory on your extended 80 column card with the help of Paul Overaa's routines. **31**

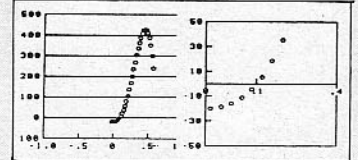
Appletips

● Beat the bug in the ProDOS chain command, and add lines to your program which can't be deleted. **44**

Books

● Books on Business Basic for the Apple III and Epson printers are reviewed this month. **46**

Graphics



● In Part XIV of the Apple User Graphics Library, Peter Gorry provides some powerful labelling routines. **49**

DOS

● Francis Riley provides some excellent enhancements for your DOS. **53**

New Products

● The latest ways to spend your money. **58**

Feedback

● Three pages of readers' letters on using MacTerminal, the RWTS and more. **61**

Classifieds

● Bargain offers from your fellow Apple users. **64**

Order form

● Subscriptions, back issues, binders to keep them in. **66**

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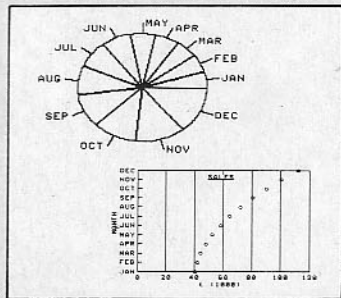
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News

● Apple back behind the II family, handling the holiday rush, solar powered IIc, plus Workstation 2000 winners and more. **5**

Graphics



● In Part XV of the Apple User Graphics Library, Peter Gorry completes the automatic annotation routines. **9**

Application

● Apple IIIs provide the power behind a successful computer bureau. **18**

Spreadsheet

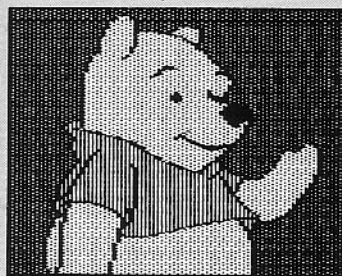
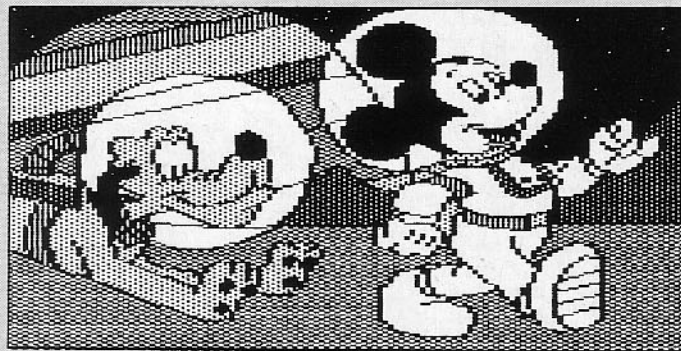
Country	Quantity	Unit Cost in Local Currency	Unit Cost in £ Sterling	Total
Widgets Italy	150	9000.00	600.00	2.811
Hoops France	680	68.28	4000.00	19.101
Bisks New Zealand	450	4.26	900.00	4.211
Pillars Greece	340	1968.00	2720.00	12.731
Frisps U.K.	700	7.00	5460.00	25.562
Loos Japan	360	948.00	1080.00	5.662
Kanas Israel	680	287.00	793.33	3.711
Bullins Switzerland	670	27.54	4250.00	19.801
Tridons Australia	250	9.11	1500.00	7.021
Total Cost:			21363.33	100.001

● Geoff Wood shares some secrets of successful spreadsheet use. **21**



Volume 5
Number 8
August 1985

Fun & Games



● The old hands take a look at Winnie The Pooh, Mickey Mouse and the award-winning Hitchhiker while our youngest ever reviewer looks at Print Shop. **42**

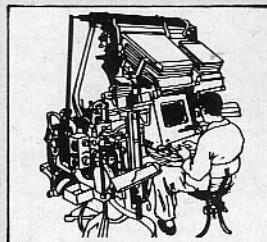
Wordstar

● Horace Tong solves the Wordstar screen scrolling problem and provides Apple User with its first chance to publish Z80 code. **26**

Programming

● Generate programs with the aid of K.P.Yu's Descartes program. **29**

Publishing



● Bill Hill puts together the pieces of a jigsaw which looks set to turn the publishing industry upside down. **33**

Pascal

● Random access files get the Stuart Bell treatment in this month's tutorial. **35**

Macintosh

● Steve Hughes reviews MicroPlanner for the Macintosh and likes what he sees. **39**

Utility

● Steve Franks shows how to access DATA lines in any order. **47**

New Products

● All the latest ideas on how to spend your money. **52**

Feedback

● Double-res difficulties, how to blow up the video circuitry, two pages of readers' letters. **55**

Classifieds

● Bargain offers from your fellow Apple users. **56**

Order form

● Subscriptions, back issues, binders to keep them in. **58**

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News

● All the latest events in the world of Apple computing.

5

MicroLink

● This month's update on news from Britain's national electronic mail service.

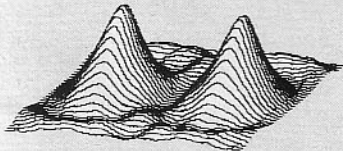
9

Pascal

● Stuart Bell continues the tutorial series with an explanation of units.

10

Graphics



● While Peter Gorry takes a well-earned rest, Max Parrott shows how to dump graphics to an Imagewriter.

17

Macintosh

● Will Jazz be music to your ears? Bill Hill gives his opinion on this important package.

21

Utility

● If you've ever tried to compare two versions of a program, you'll appreciate the usefulness of this routine from Richard Shann.

24

apple user

Volume 5
Number 9
September 1985

Spreadsheet

File: HOUSECALC		REVIEW/ADD/CHANGE		Escape: Main Menu	
1:	HOUSE BUYING AND SELLING CALCULATOR				
2:					
3:					
4:					
5:	SELLING PRICE FOR EXISTING HOME		45,000		
6:	BUYING PRICE		68,000		
7:					
8:					
9:	DEDUCT REPAYMENTS ON EXISTING HOME				
10:					
11:	First mortgage				
12:	Home improvement				
13:	TOTAL REPAYMENTS				
14:					
15:	GROSS SURPLUS FROM HOME				
16:					
17:	ADD:				
18:	First				
19:	Saving				
20:	Loan				
21:	TOTAL				
22:	DEDUCT SELLING				
23:					
24:	Estate				
25:	Stamp				
26:	Other				
27:	Other legal costs - selling	450			
28:	Survey - new home	125			
29:	Removal & sundry costs	400			
30:	TOTAL SELLING/BUYING COSTS		3,155		
31:					
32:	TOTAL FUNDS AVAILABLE FOR PURCHASE			67,345	
33:					
34:	SURPLUS/SHORTFALL				-655
35:					
36:					
37:					
38:					

● Can you really afford that dream home? John MacGibbon's Appleworks spreadsheet may provide the answer.

13

Review

● Bill Hill reviews three packages that provide page layout facilities. Is this the future of publishing?

29

Application

● Fast and efficient kitchen design with an Apple IIe based system.

32

Classifieds

● Bargain offers from your fellow Apple users.

34

Education

● Jenny Preece describes the rationale behind a package aimed at helping teachers select software.

35

Programming

● A. Reicher provides the last word in bomb-proof input routines.

38

Books



● Before you rush out to the bookshop, read these reviews. Choosing accounting software and Visicalc are the subjects this month.

44

New Products

● All the latest ways to spend your money.

46

Fun & Games

● Skyfox, Wishbringer and Rescue Raiders provide the fun and games for our reviewers this month.

51

Feedback

● How to access two screens in Pascal, a Dublin BBS, the Data Protection Act and more.

55

Order form

● Subscriptions, back issues, binders to keep them in.

58

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News

● A 512k Apple II on the horizon, Steve Jobs is selling his Apple shares, and more.

5

MicroLink

● This month's update on news from Britain's national electronic mail service.

9

&DOSFILE

● Peter Harris starts a new series with some powerful file management routines.

11

Spreadsheet

● If you are one of the many people who pay your bills by monthly budget, this spreadsheet from Chris Burrige could save you time and money.

18

Education

● How a Hertfordshire college is putting Apples to good use.

22

Utility

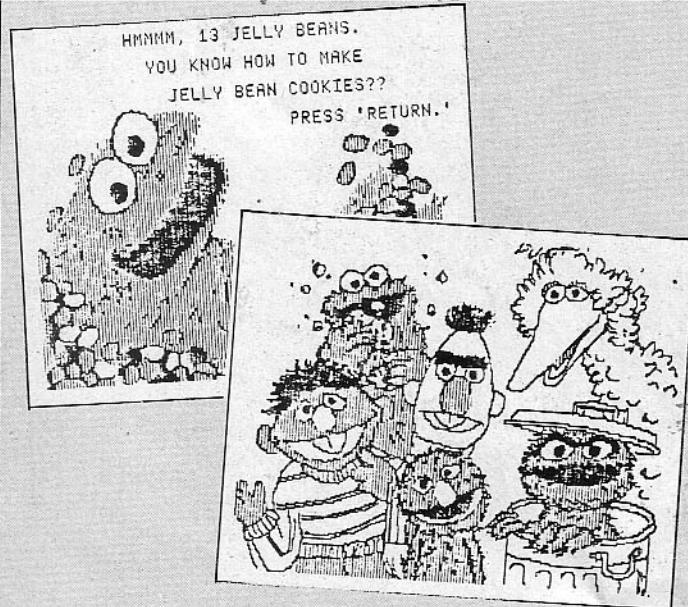
● Use your language card and David Haynes' program to provide instant access to all those Page 3 routines.

23



Volume 5
Number 10
October 1985

Fun & Games



● Four packages for the whole family from the Children's Television Workshop, and at Bargain Basement prices too.

27

Review

● Geoff Wood expands his Appleworks desktop with Ramworks.

29

● Cliff McKnight looks at two digitisers for the Apple II and Macintosh.

32

Appletips

● A full page of tips here, and there's more throughout the magazine.

31

Graphics

● In Part XVI of the Apple User Graphics Library Peter Gorry gives updates for the histogram routines.

35

Programming

● S. Eveson's handy USR routine adds a factorial function to Basic.

37

Pascal

● Stuart Bell continues his tutorial series with a look at assembly language programming under Pascal.

38

● David Wells presents a modification to the Pascal output routine to use the lower case chip.

42

New Products

● All the latest ideas on how to spend your money.

45

Utility

● Find out how much space remains on your discs with Max Parrott's useful routine.

53

Classifieds

● Bargain offers from your fellow Apple users.

55

Feedback

● Spell-check under ProDOS, Belgian Mac user group, trouble with Sage Accounts, and more.

56

Order form

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News

● New drives and memory card for the II+ and IIe, new price for the IIc bundle, and more.

5

MicroLink

● The latest update from Britain's national electronic mail service.

9

Skyfox offer

● This month we've got a special offer on Skyfox, the great 3D flight and fight simulation.

15

MEMDOS

● Jon Parry enthuses over the operating system that's transformed his database programs.

17

ProDOS

● Chris Payne explains how ProDOS gives Applesoft a new lease of life.

21

Spreadsheet

● If it's your job to work out duty rosters, Bill Hill's suggestions could save you a lot of brain-ache.

25

Disc offer

● A free disc is yours when you subscribe to Apple User.

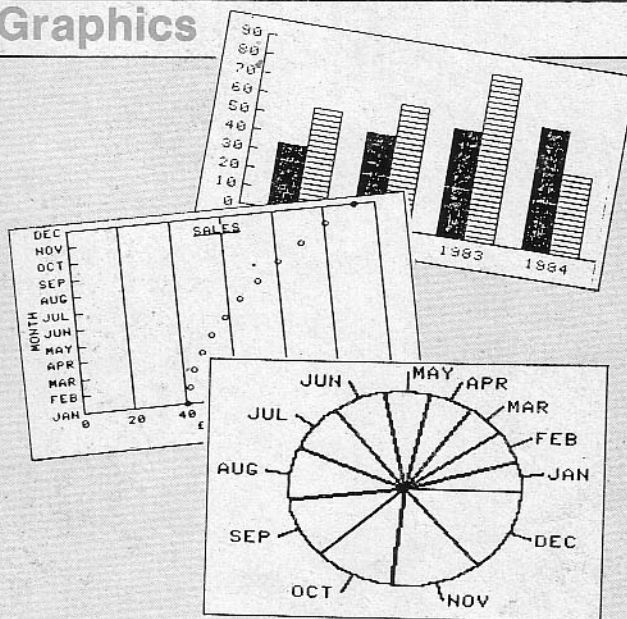
26



apple user

Volume 5
Number 11
November 1985

Graphics



● It's the end of the road for the Apple User Graphics Library. Full details of how you can now get the complete series on disc.

10

Macintosh

● Microsoft's Excel gets the Bill Hill seal of approval.

28

● Read how Apple User's Mac got the upgrade treatment.

29

Fun & Games

● Infocom's Suspect and Broderbund's Karateka and Dazzle Draw provide this month's entertainment.

31

Review

● The Cirtech CP/M Plus system gives the Apple IIc access to an even larger software base.

34

Comparison

● John MacGibbon compares some Apple word processors with their MS-DOS competitors.

37

Pascal

● Stuart Bell continues the Pascal Tutorial series with a close look at parameter passing.

38

&DOSFile

● In Part II of the series Peter Harris provides two more important routines.

42

New Products

● Two pages of money-spending ideas to enhance your hardware and software.

47

Utility

● If you've got a new half-height disc drive, you might not be using it to capacity. Chee Wei-Li will show you how.

54

Classifieds

● Bargain offers from your fellow Apple users.

56

Feedback

● Sideways Appleworks spreadsheets, Apple III software plea, problems with E-Z Draw and more.

58

Order form

● Order everything on this one handy form.

60

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August 1982

Games review (Bandits, Suicide, Swashbuckler, Fly Wars) - Instruction file editor - Teach yourself Morse, Part I - VisiCalc section - Pstext II review - Asynchronous data transfer, Part II - Omnis review - A melody from your micro - Summary of 10 utilities - Make your own user port, Part II - Mah Jong - Number sorting - Elements of the Apple, Part V - Guidelines for buying a school Apple - Educational programs reviewed - PLUS four pages of Compucopia and two Appletips.

February 1983

Think Tank - Interactive editor-assembler, Part III - Development of Scrabble on the Apple - VisiCalc's storage command DIF - Games reviews (Escape from Rungistan, County Fair, Snake Byte, Snack Attack) - Software reviews (Structured Basic, GraForth, Visischeduler and Lisa and the Ile - Pascal Pointers - Network analysis - Handling interrupts - Makeweight grading system - Date-stamping DOS - Educational game (listing) - Formatted Applesoft. PLUS four pages of Compucopia and seven Appletips.

September 1983

Games reviews (Evolution, Wayout, Aztec, Crisis Mountain) - First impressions of Lisa - Think Tank - Reviews (Apple Interactive Data Analysis, File-Fax, Storyboard) - Replicating with Visicalc - Printers Daisywheel v. dot matrix, maintenance contracts, stationery, Pipeline printer buffer and Fingerprint reviewed, new products, printer jargon, A-Z guide to printers, plotters and intelligent interfaces) - Apples and youth training - PLUS three and a half pages of Compucopia and 11 Appletips.

April 1984

Reviews (TK1 Solver, Rapid Reader, Homework, Pen-Pal, Cache 16/64 printer cards) - Macintosh software flashes - Build your own graphics package part III (Shape Tables) - Developing ProDOS programs - Pascal Tutorial Part IV - 16-page guide to Apple extras - from typist to Apple User - Games reviews (Wizardry III, The War of the Samurai, The Spy Strikes Back) - Encoding routine - Book reviews (Visicalc for the Apple II Plus, The Elementary Apple) - PLUS News, New Products, and Letters.

November 1984

Apple in a primary school - Games (Flight Simulator II, Drol, BC's Quest for Tires) - Graphics Part IX (including review of Cat Graphics) - Pascal Tutorial: Introduction to Pascal Operating System - Macintosh languages: MacForth, MacBasic, MBasic & Instant Pascal - Two Macintosh books reviewed - Communications Part III: Software - Loading DOS Toolkit assembler onto language card - Software reviews (Digisolve's Pixel Paint, Hilderbay's Payroll) PLUS Letters, News and New Products.

February 1985

Steve Wozniak talks about Apple II developments - Quicksort algorithm in Forth and Basic - Games (Deadline, Witness, Planetfall, Enchanter, Scorerer, Expedition Amazon) - Graphics DIY part XI - Targeting with spreadsheet - Apple to Apple file transfer - Miners' strike resolved by computer? - Chemical formulae on Lisa - Two Macintosh books reviewed - World of the 6809 Part III - Software reviews (Sales Edge and Management Edge) - Application: book publishing - Split screen techniques - PLUS News, new products and letters.

October 1982

Games reviews Knight of Diamonds (the second wizardry scenario) and Pig Pen - Think Tank (with listings) - Med-res graphics, Part II (filling in shapes) - Lisa assembler language review - Magic of VisiCalc - VisiCalc Business Forecasting Model review - Cross reference listing program - Apple-vox speech synthesiser review - Morse Code, Part III - Computerised flash card for schools - French Verb program review. PLUS four pages of Compucopia and seven Appletips.

March 1983

Darts game listing - Think Tank - Beginner's look at System Master - Games reviews (Blade of Blackpoole), Banner Magic, Free Fall, Computer Scrabble) - Lower case displays in Basic - Buying a financial spreadsheet - Reviews of Multiplan: Apple-writer III; Geometry and Measurement, Drill and Practice; CLIP - News about Lisa and the Ile - Applesoft error handling, Interactive editor-assembler, Part IV - Apple on a pig farm - Fickle Finger proofing, Part I. PLUS four pages of Compucopia and four Appletips.

October 1983

Games reviews (Ultima II, Pot O'Gold Plus, Sherwood Forest, Juggler) - Think Tank - In-Circuit Emulation Part One - Lisa (emergency planning with the N.W. Health Authority, developing Busifile) - reviews (Basiccode 2, Metacraft's Forth) - Graphics (Digisolve Vector Graphics board and Apple Business Graphics) - Visicalc v. Beebcalc - Training (DIY course selection, what is training, computer-based training) - Package Deal game listing - improving life for the disabled. PLUS Compucopia and Appletips.

May 1984

Special report on the Apple IIc micro - Preview of Appletips - Lisa mapping - Using DOS within Basic - Who should buy Multiplan? - Grandad gets his Apple - Graphics Package Part IV - Games reviews (The Missing Ring, Color Me, Black Death) - Game Listing: Apple Raid - Pascal Tutorial Part V - Macintosh: the Sand Project - Semi-standard letters with Appletips' WPL - Reviews (PaperGraphics, Transitions, Mem/DOS, Ultraterm), PLUS News, New Products, Letters and Appletips.

December 1984

Games (Spare Change and Gumball) - Desert Island Discs with Pam Fisher - Pascal Tutorial (final look at the Operating System) - Spreadsheet (VisiCalc command table) - Lisa 7/7 Software - Macintosh games (Pensate and Frogger) - How Macintosh helps an actress - The world of the 6809 Pt. I: the Rehaflex board - Escher game listing - Graphics DIY Part X (including review of Sweet-P plotter) - Hilderbay SSP software review - Communications - PLUS News, New products and letters.

March 1985

Circle drawing algorithms - Super Pilot System Log - Summarising data with VisiCalc - Competitive estimating with Multiplan - Graphics DIY part XII - Ampersand editing - Macintosh (MacTerminal, Mouse Stampede, optical mouse, plus Mac book) - Reviews (Merl modem, Intec hard drive, Vision 128/256 card, the Editor, plus three educational packages) - Fun and Games (Xyphus, Fighter Command, Picture Writer) - PLUS News, New products, letters and Appletips.

April 1983

Games reviews (Type Attack, Microwave, Tubeway) - Word Processing (Supertext, Executive Secretary, Wordstar, Word Handler) - economics of using electronic worksheets - Fishing (game listing) - Apples in the pet foods and film slides industries - Anatomy of the Ile - Beginner's programming - Reviews (Omnis, Strobo 100 Plotter, Hilderbay Bookkeeper, Turnkey CP/M) - Programming for the classroom - Fickle Finger Proofing Part II. PLUS four pages of Compucopia and six Appletips.

November 1983

Think Tank (Pascal Blockwrite/read, fast data-logging, input validity checking, date verifying) - Games reviews (The Alien, New World, Crime Wave) - Neat Pascal listings - Interactive Video at American Express - Reviews (CP/M Card, Disc-o-doc, The Graphics Magician) - In-circuit Emulation Part 2 (Rovino ICE II card) - Graphics (Super resolution, hi-res text strings) - Graphs from Visicalc - Lisa's Cullinet mainframe link - Logo Part I - schools' software library. PLUS Compucopia, News, Letters and Appletips.

June 1984

The Steve Jobs interview - Pascal Tutorial Part VI - Arbitrary byte patterns in memory - Graphics package Part V - Spreadsheet: Visicalc's @LOOKUP function - Compile and solve crosswords with Appletips' WPL - British games reviewed (Derby, Soccer Manager, Election, Necromancer, Mekhula) - Modems, micros and bulletin boards - Program for marking schoolwork - Reviews (Pixy plotter, TG Track Ball, C/WP colour modulator) - Logo round-up. PLUS News, New Products and Letters.

January 1985

John Sculley's View of 1985 - Games (Gelfing Adventure, Story Maker, Stellar 7) - Application: Apples down on the Farm - Cloze Technique (Plus review of Clozemaster) - World of the 6809 Part II: Flex Operating System - Apple II v. IIT 2020 - Reviews (Ormbeta Compact Accounting System, CGL Half-Height Drive) - Apple IIe and IIc compatibility - Handling Interrupts and large arrays in Pascal - Reporter's view of Macintosh - PLUS News, New Products, Appletips and Letters.

April 1985

Apples in the dental surgery - Adding graphics commands to Applesoft - Using the VBLANK signal - Getting to grips with software - Reviews (Speed-Demon card, PFS File/Report for Macintosh, W-P-LAB) - Weather forecasting with Mac - Weather Filer's D command - Fun and Games (La Triviata, Design Your Own Home: Architecture, Interiors, Landscape) - Books (Appletips, VisiCalc, Machine level programming) - Index to Windfall Vols. 1 and 2. PLUS News, new products, Letters and Appletips.

May 1983

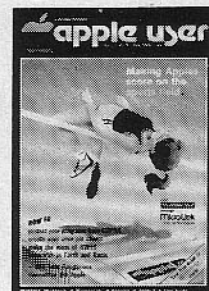
Think Tank (Visicalc Magic, Appledarts sound, hi-res routines) - Games reviews (Spy's Demise, Teleport, Beer Run, Prism, Bug Attack) - Moans about manuals - To copy or not to copy - The outdoor Apple - Reviews (Wildword, Apple Circuit, Personal Data Analysis) - Date conversion - Understand the Epson Part I - Visicalc Review of Vergecourt 128K RAMcard and Cdex Visicalc training course - Graphics (generating bar indicators with listing) - Standing Wave Plotter. PLUS Five pages of Compucopia and seven Apple tips.

December 1983

Think Tank (memory dump in Forth; shape filling) - Games Reviews (Dark Crystal; Dawn Patrol; Minit Man; Flip Out; Snooper Troops 1 and 2; Dragon's Keep; Troll's Tale) - Reviews (Word Juggler; Koala Pad Touch Table; Wildcard Graphics) - How to choose software for your business - Talking to dolphins - Write your own adventure games - Estate Agency with a network of Apples - Lander Game Listing - Visicalc cash flow projections - Drawing with Logo. PLUS News, Letters and Appletips, Compucopia.

July 1984

Capitol CAD package - Automating CP/M with Pseudo disc drive - Wordstar on Epson printer - Relational Databases - Games (Lode Runner, Coveted Mirror, Crypt of Medea, Queen of Hearts, Quiz Listing) - Screensplicer - Ile super-res graphics - Pascal tutorial part VII (defining procedures) - Volume control for Apple II - Appletips review - Lisa helping visually handicapped - Calculating mortgage repayments with Visicalc - PLUS News (including report on Apple '84), New Products and Letters.



June 1983

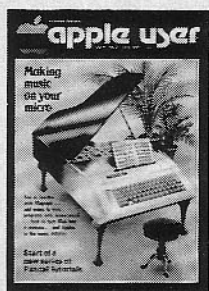
Think Tank - Games reviews (Pie Man, Asteroid Field, Star Thief, Cyclotron, Star Blaster, Warp Destroyer) - Security with Data Encryption - Product reviews (Routine Machine, List Handler, Apple III CP/M Softcard, Savy, Apple Project Manager and Micronet) - Apple '83 preview - Screen editing for beginners - Understanding the Epson Part II - Book review (Create Word Puzzles with Your Micro) - More Apple Plot facilities. PLUS five pages of Compucopia and eight Apple tips.

January 1984

Hi-res text generator - Game listing (Patience) - Games reviews (Apple Cider Spider; Theesus and the Minotaur; Thunderbombs; Buzzard Bait) - Lisa Workshop - Logo in the US - Pascal Tutorial Part I - Pascal PEEKing and POKeIng - Reviews (Bit Stik version 2; CIA utility; Nano 6502 Assembler; Aviette FDD 820 disc drive; KGB-40 printer; AK-GC joysticks; Praxis 35 typewriter/printer; Visicalc Advanced) - Appletips' word counting. PLUS News, New Products, Letters and Appletips.

August 1984

Communications - Apple in a haulage company - Book Review (Apple Basic Data File Programming) - Reviews (Scribe 3D CAD package, Sage CP/M Database, Codewriter IIe, Ramdrive IIe, ShortCuts) - Games (Plasmania, Bouncing Kamungas, Pinball Construction Set) - Graphics package part VI (text handling by machine code) - Lisa organising meetings - Pascal Assembler - Speech input via Voice Input Module - Multiplan helps with cricket scores PLUS News, New Products, Letters and Appletips.



May 1985

Sports Day runs smoothly with Apples - Graphics DIY Part XIII (pie charts) - Reviews (The Workbook, Macputer IIc, Copytext, Omnis 2 on Macintosh, seven Logo books) - The RWTS explained and demonstrated with a disc verify routine - protecting programs from Copy - Pascal (directory access from within programs) - Bin-search in Forth and Basic - Reaction Timer - Apples in Hungary - Fun & Games (Smart Shopper, Plantin' Pal, Micro Cookbook) - PLUS News, New products, Letters and Appletips.

June 1985

Apples keep track of music companies and Macintosh designs record sleeves - Fun and Games (Music Construction Set, Song Writer, Music Readiness) - Pascal Tutorial: start of a new series looks at records - Reviews (Tick-Tack translation package for Apple II+/Ile, Musicworks for Macintosh) - Graphics (three books reviewed) - Mughrah: light dependent resistors making sounds - Ampersound: routines for making music and sounds from Basic - PLUS all the latest News, New Products and Readers' Letters.

November 1982

A beginner's guide to PEEKs and POKEs. Part I - Games review (Galactic Wars, Night Mission Pinball, Raster Blaster, David's Midnight Magic and three Quick Spins) - Think Tank (with listings) - Three 80 column cards evaluated - Visicalc: Brush up your algebra - Bit Stik graphic system reviewed - Pitfalls in producing educational software - Treasure Islands educational game reviewed - Med-res graphics, Part III (Ampersand routine). PLUS four pages of Compucopia and six Appletips.

July 1983

Apple '83 review - Think Tank - Games reviews (Zork I, II and III, Hitch-hiker's Guide to the Galaxy, Wavy Navy, Shuffleboard) - Using a printer with DOS - Reviews (Micro Planner and The Spreadsheet) - Visicalc potpourri - Beginners' PEEKs, POKEs and CALLS - Creating a turnkey system - Atomic research Apples - File organisation methods - Insurance broking with an Apple - Pilot Animation - Tip for using both sides of a disc. PLUS five pages of Compucopia and seven Appletips.

February 1984

Macintosh Revealed - Apple in the clothing industry - Book Review - Reviews (ProDOS, Apple's new operating system; Bank Street Writer; Keystar for Wordstar; Word Weaver III) - Logo: manipulating human language - Lisa Workshop Part II - Build your own graphics package - Games (The Quest, Story Machine, Repton, Sammy Lightfoot) - Date Manipulation - Voice Darts - Pascal Tutorial Part II - Pascal Animation - Visicalc cashflow models. PLUS News, New Products, Letters and Appletips.

September 1984

How an Apple helps police hero - Updating Apple graphics and arcade design - Serial data transfer - Games (Early Games Music, Learning with Leeper, Fuzzywomp, Halloween) - and DIY Graphics Part VII (including review of Doublestuff) - Macintosh (journalist's view of MacWrite, Software Development, Transylvania, Linking Lisa to ICL mainframe) - Pascal Tutorial - Pilot Interpreter - Spreadsheet (including bug in VAV) - Reviews of Graphpak and Format-80 Enhanced - News, New Products and Letters.

January 1983

Think Tank - Book reviews (Apple Graphics and Arcade Game Design) - Games reviews (Wizard and Princess, Transylvania) - Six-page guide to memory storage (guide to disc drives, new bubble memory, 128k RAM cards, disc back-up, mini-Winchester drives, new Apple drives) - Walt Disney's TRON - Graphmag review - Installing Wordstar - Business cash flow with Visicalc - Pilot review - Interactive editor-assembler, Part II. PLUS four pages of Compucopia and eight Appletips.

August 1983

Think Tank - Reviews (The Accelerator Board - tripling the speed of an Apple II; Micro-planner Part II; The Ramview 80 and Vision 80 80 column cards for the IIe; SuperPilot - does it set a CAL standard?) - Games reviews (Kabul Spy, Super Taxman 2, Succession, Jaw breaker, Spectre) - III or IIe? the Apple III's place in the market - Use indices for What If? analysis with Visicalc - Basic editing for beginners - Pascal Disc Directory - PLUS five pages of Compucopia and six Appletips.

March 1984

Games listings (Noughts and Crosses; Twenty Questions) - Pop music Apple - Reviews (Studentdata, Sidevise) - Games reviews (Facemaker, Police Artist, Microbe, Adventures in Flesh, Dungeon!) - Pascal Tutorial Part III - Lisa (Launch of Lisa 2 series; SunAccount ledger system) - Graphics pages in memory, plus two histogram routines - Indexing Forth discs - Critical Path Analyses with Visicalc. PLUS News (More after Macintosh; multiplying mice; Lisa wins Rita), New Products, Letters and Appletips.

October 1984

Appletips (drive-cleaning, DOS, REMs and Lists) - Apples in a clothing factory - Book reviews (games programming, Pilot, Apple IIc) - Games (Gruds in Space, Cherryspin, Aqualtron) - Graphics Part VIII (including review of Spectrogram colour card) - Mac software reviews (MacForth, Click Art and Mac the Knife) - Simulation of radioactive decay and Einstein solids - Pascal tutorial - Flashcalc - Reviews of Blackboard printer card and CWP drive - PLUS Letters, News and New Products.

July 1985

Apples at the heart of Papworth Hospital - Fun & Games (Secret of Arendarvon Castle, Antagonists, Fahrenheit 451, Rendezvous with Rama, Amazon, Shadowkeep, Adventure Writer) - Pascal Tutorial: using files of records - Binary file load utility - Using extended 80 column card memory - Macintosh (Flowcharting, Preview of Guide) - Book reviews (Business Basic, Epson printers) - Reviews (FingerPrint and Printinterrupt) - Graphics DIY Part XIV - DOS patches - PLUS News, New Products, Letters and Appletips.

August 1985

Spreadsheet secrets shared - Apple IIIs provide power behind computer bureau - Graphics DIY Part XV - Wordstar scrolling problems solved - Descartes data processing program generator - Fun & Games (Winnie the Pooh, Mickey's Space Adventure, Print Shop, Hitch-hiker's Guide to the Galaxy) - Mac at the centre of a publishing revolution - Pascal Tutorial: random access files - Review of Micro Planner for Macintosh - Restore to any Data line - PLUS News, New Products, Letters and Appletips.

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