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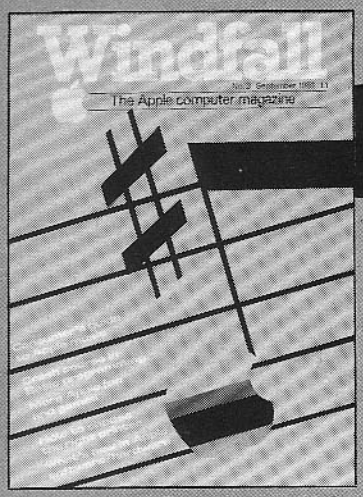

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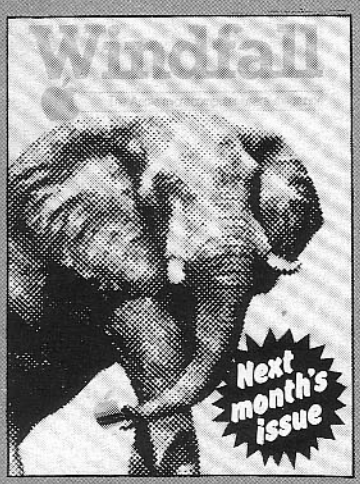

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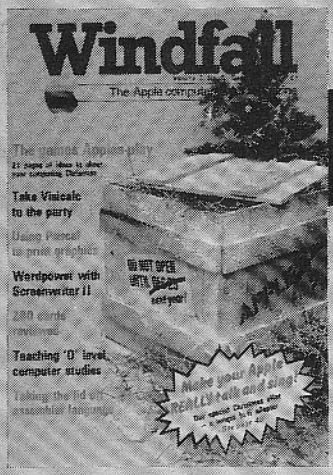

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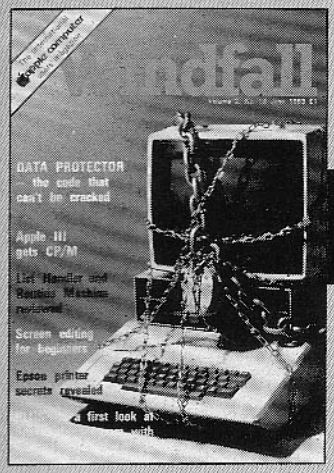

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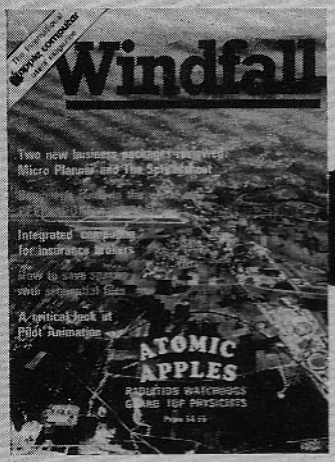

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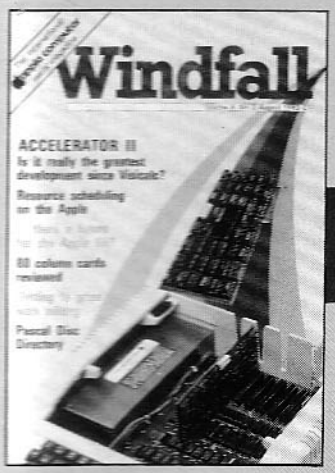

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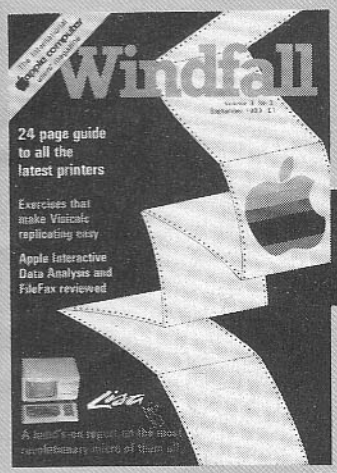

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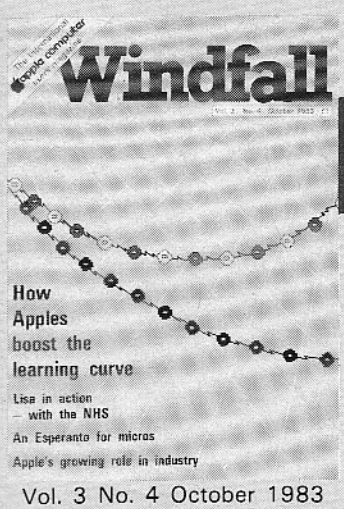

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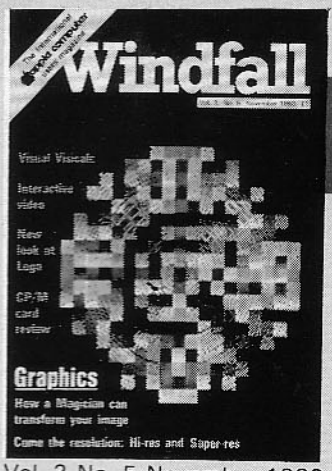

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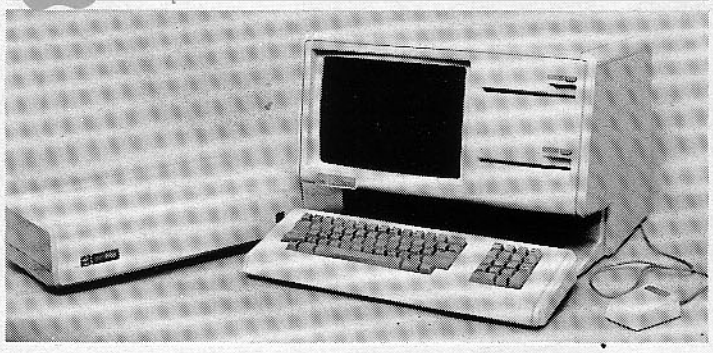

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- Delve into the mysteries of the Apple disc with the CIA utility package. It could be a "must" in the Apple user's repertoire. 40

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- The Olivetti Praxis 35, Applewriter and the IIe. 61

Apple User Managing Editor **Derek Meakin** *Production Editor* **Peter Glover** *Features Editor* **David Creasey**
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apple user
Volume 4
Number 2
February 1984

Macintosh, the mighty mite

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

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● 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

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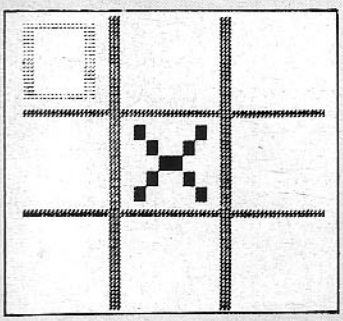

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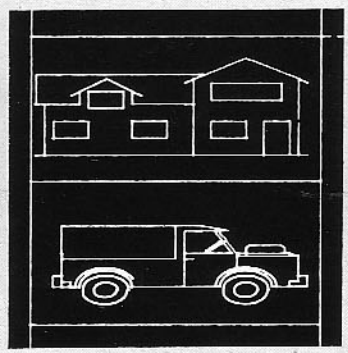

● Peter Gorry presents two histogram routines to add to your integrated graphical library. He also shows how to move a program past the graphics page. 32

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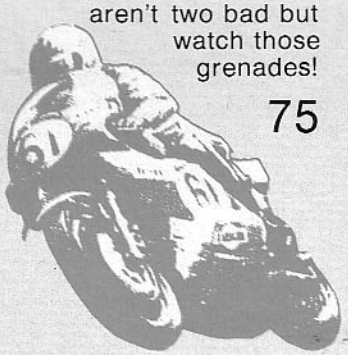

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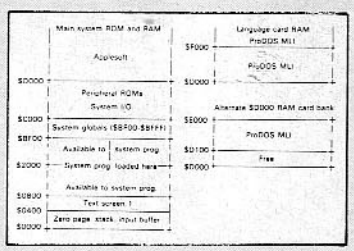

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Apple '84

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The new Apple IIc

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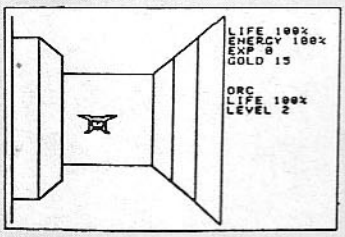

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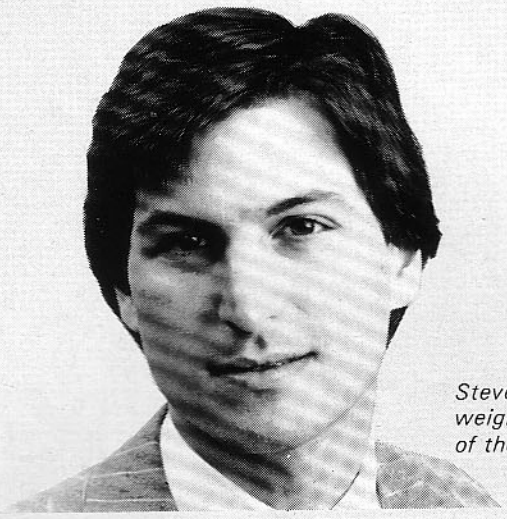

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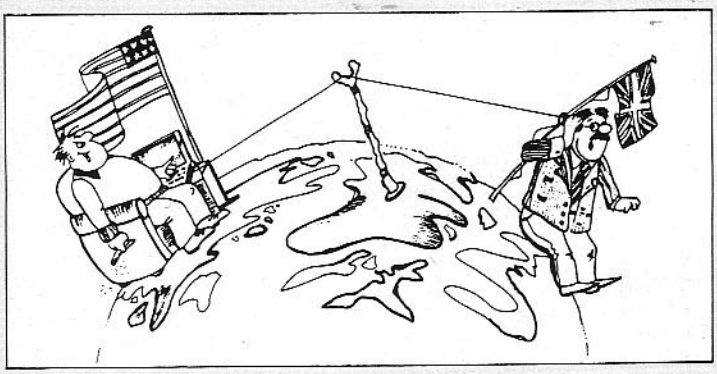

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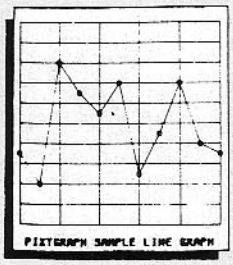

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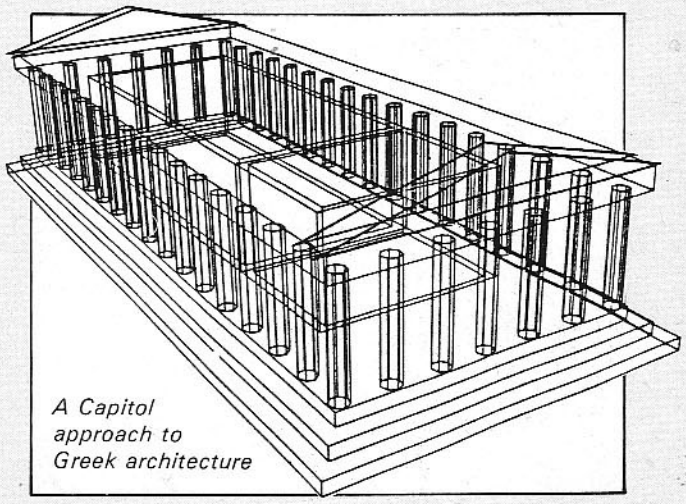
● Listing: Roger Gilbertson (of Patience fame in the January issue of Apple User) presents a listing for a do-it-yourself general purpose quiz. 57



A Capitol approach to Greek architecture

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● 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

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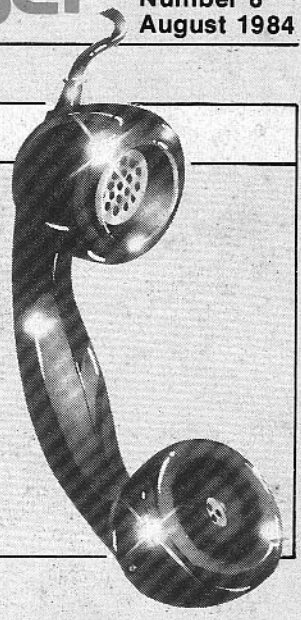

Games

● 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

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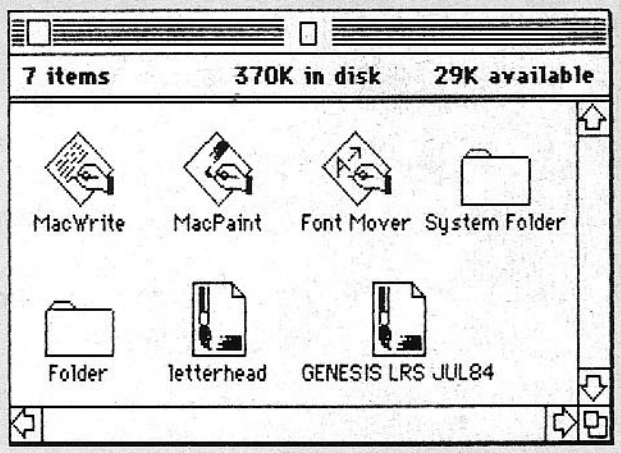

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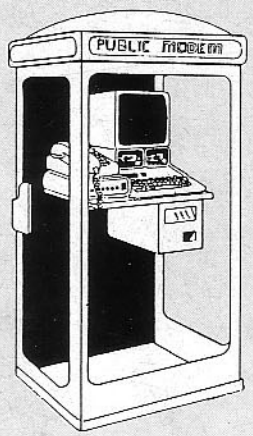

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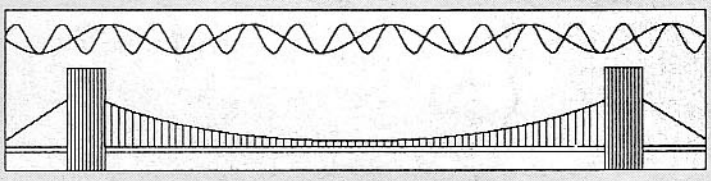

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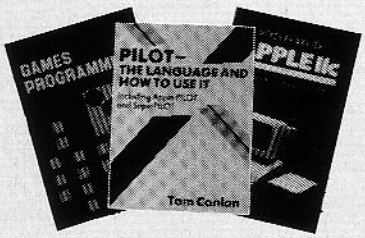

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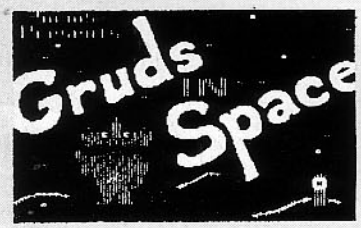

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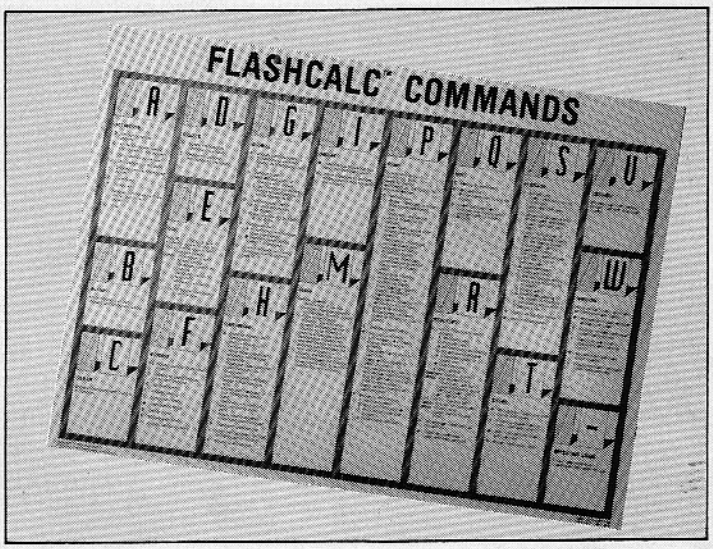

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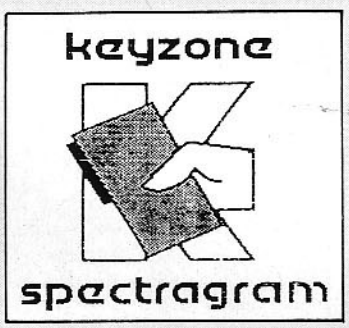

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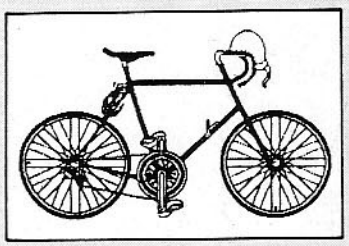

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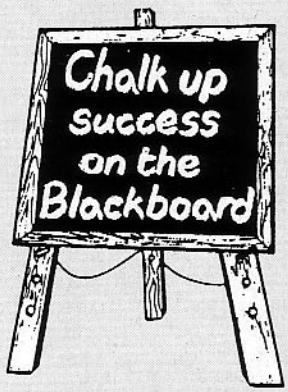

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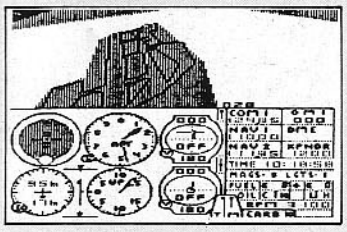

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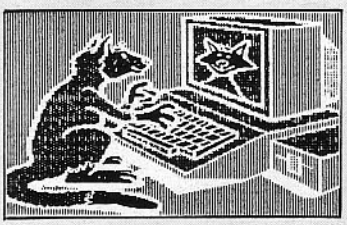

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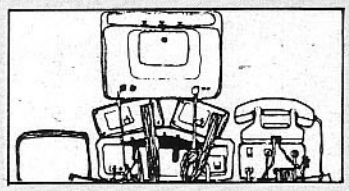

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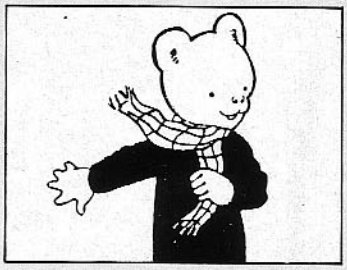

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Volume 5
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● A nail-biting time for Apple bosses as they wait to gauge the effect of the big end-of-year sales push. The first look at Moscow's new red Apple. How to use a Macintosh to design tiles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

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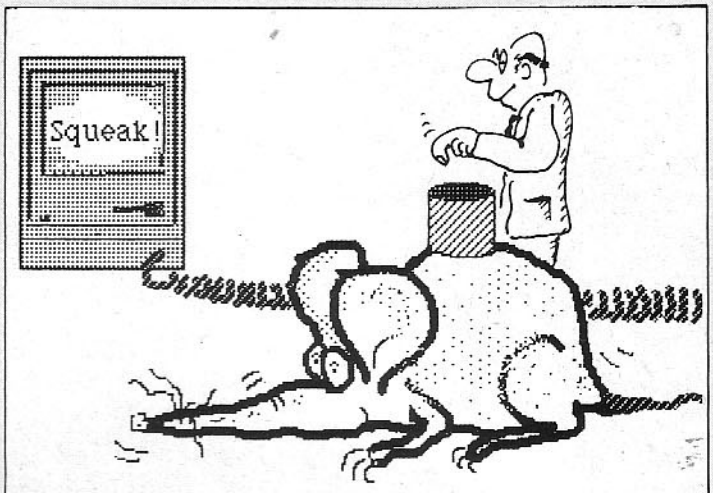

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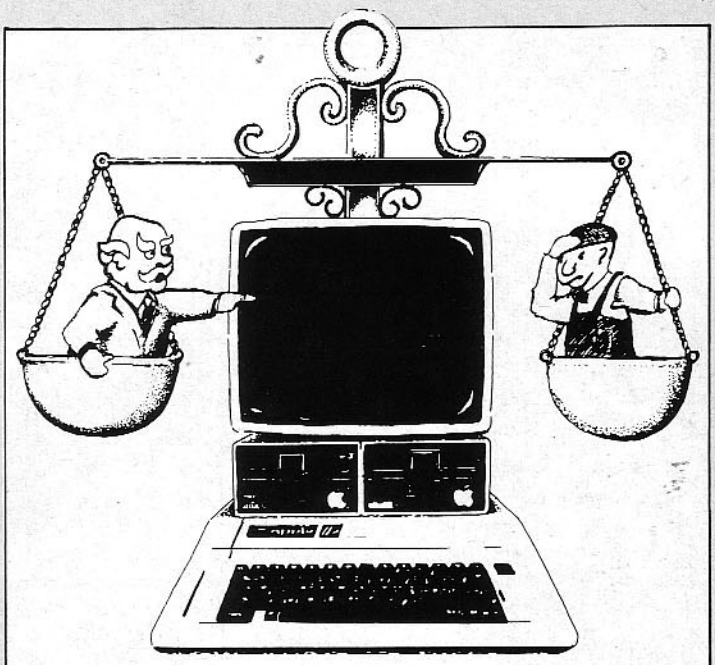

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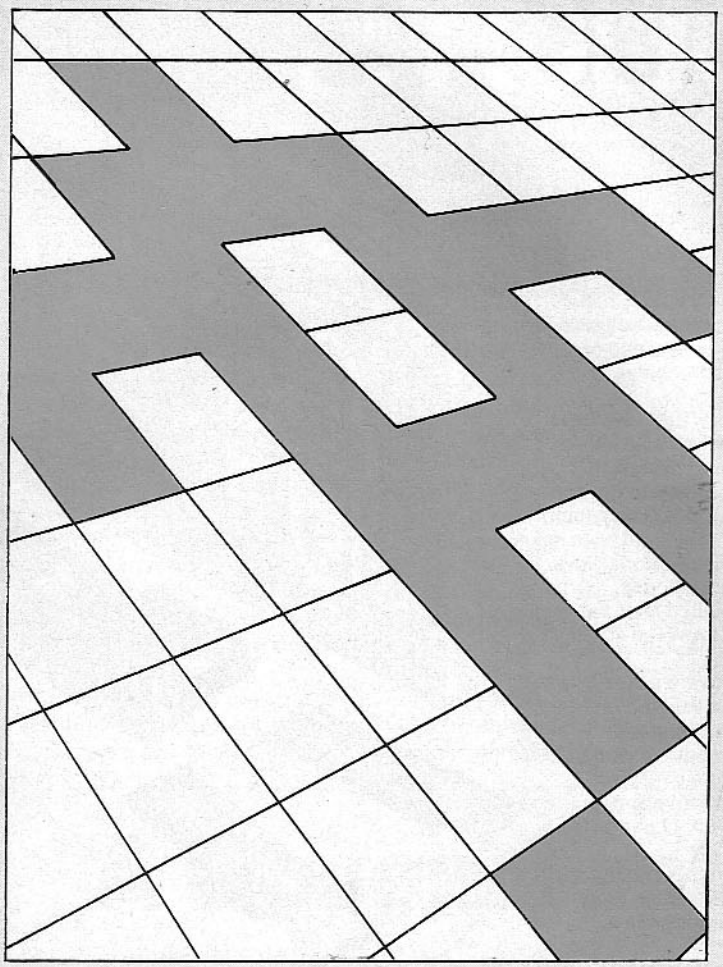

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apple user

Volume 5
Number 4
April 1985

Apple '85

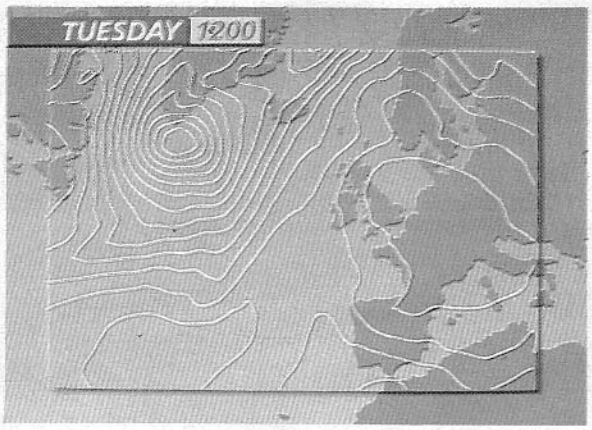
● Make a note in your diary. Don't miss the biggest Apple event of the year. 4

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



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apple user

Volume 5
Number 5
May 1985

News

● Big European crackdown 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

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

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Reviews

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

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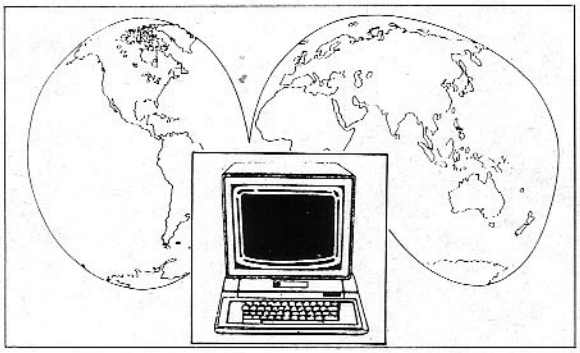

Introducing MicroLink

● 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.

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

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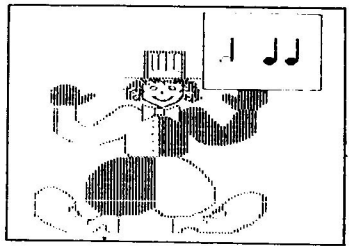
85_06

Volume 5
Number 6
June 1985

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

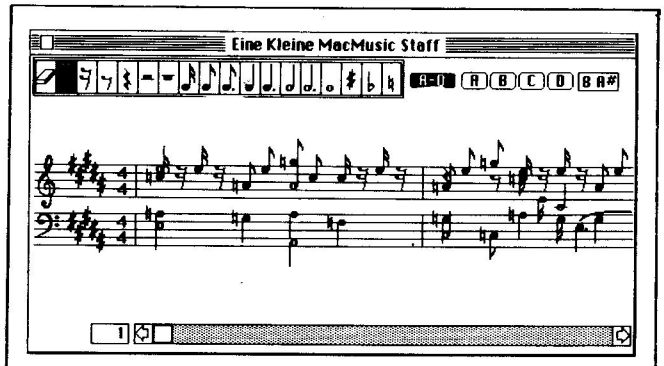
Fun & Games



● 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

Review

● Kevin Farrell looks at Tick-Tack, a useful translation package for foreign correspondence. 25

Macintosh

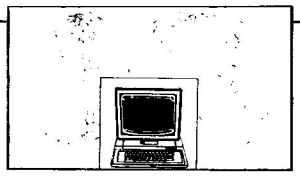
● Bill Hill demonstrates his versatility on the ivory key-caps with Musicworks. 30

Graphics

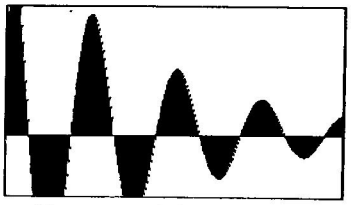
● Peter Gorry takes time out from programming the Apple User Graphics Library to review three books on graphics. 39

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

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● 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

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● A small sample of the newest ways to spend your money. 62

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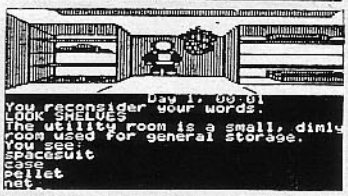
apple user

Volume 5
Number 7
July 1985

News

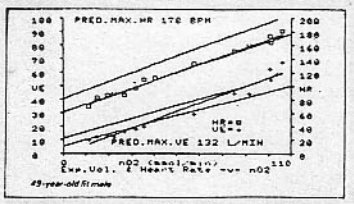
● Asian pirates finally clone the Apple IIe, Macintosh network run by an Apple IIe, and more. 5

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

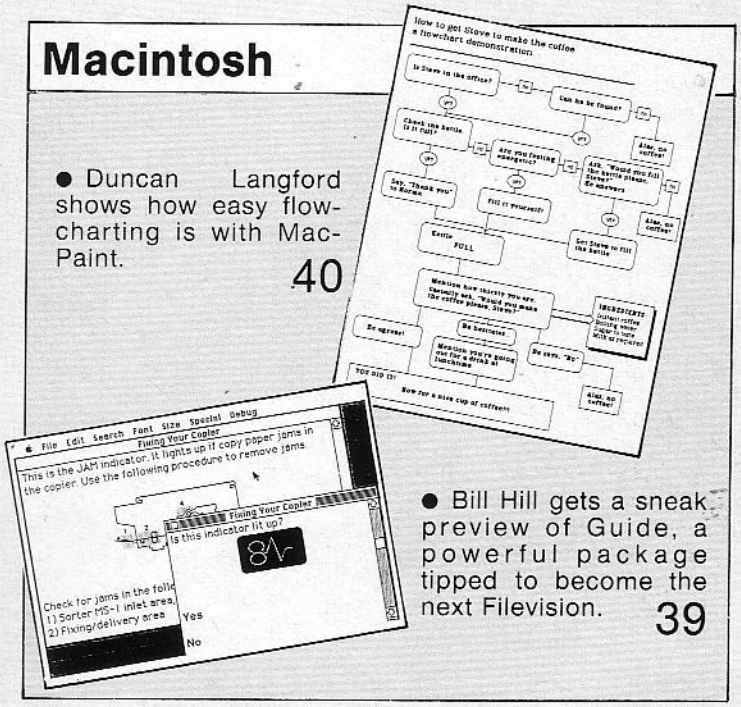
Pascal

● 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

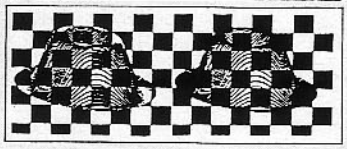
Macintosh



● Duncan Langford shows how easy flow-charting is with Mac-Paint. 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 Printerrupt. 24

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

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● 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

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

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

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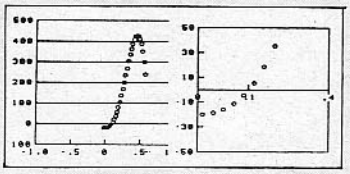

● In Part XIV of the Apple User Graphics Library, Peter Gorry provides some powerful labelling routines. 49

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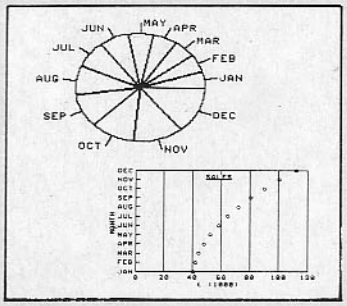
apple user

Volume 5
Number 8
August 1985

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

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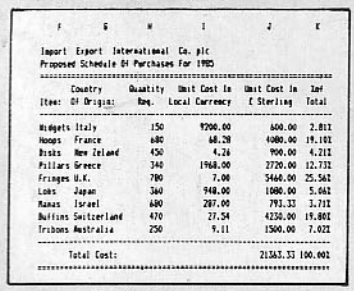
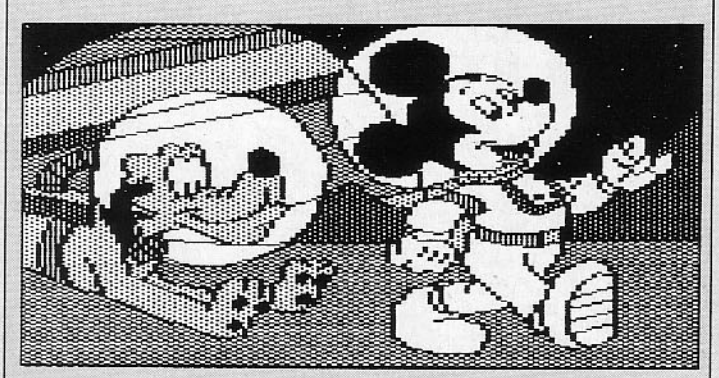


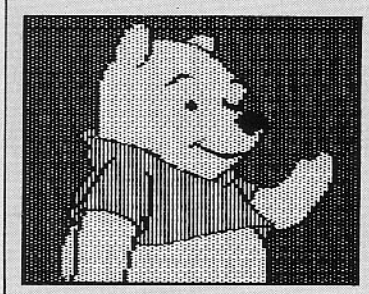
Import Export International Co. plc
Proposed Schedule Of Purchases For 1985

Item:	Country Of Origin:	Quantity Req.	Unit Cost In Local Currency	Unit Cost In £ Sterling	Inf Total
Widgets	Italy	150	9200.00	600.00	2.81%
Hoops	France	680	60.20	4080.00	19.10%
Struts	New Zeland	450	4.24	900.00	4.21%
Pillars	Greece	340	1968.00	2720.00	12.73%
Fringes	U.K.	780	7.00	5460.00	25.56%
Loks	Japan	360	948.00	1080.00	5.06%
Nanas	Israel	680	287.00	793.33	3.71%
Buttons	Switzerland	470	27.54	4230.00	19.80%
Tribons	Australia	250	9.11	1500.00	7.02%
Total Cost:				21363.33	100.00%

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

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

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

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

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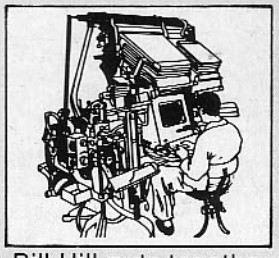

● Bill Hill puts together the pieces of a jigsaw which looks set to turn the publishing industry upside down. 33

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

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

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

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● Bargain offers from your fellow Apple users. 56

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apple user

Volume 5
Number 9
September 1985

News

● All the latest events in the world of Apple computing. 5

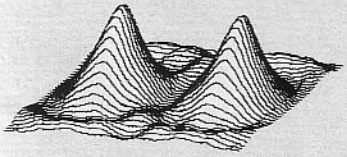
MicroLink

● 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

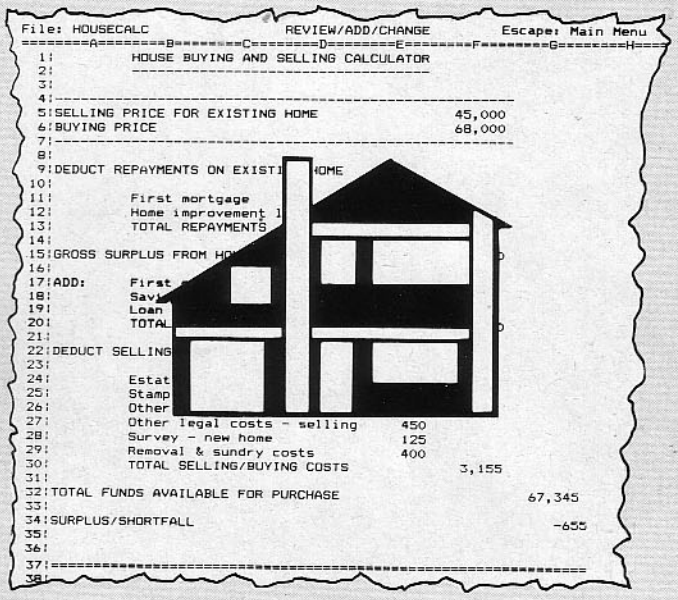
Macintosh

● 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

Spreadsheet



● Can you really afford that dream home? John MacGibbon's Appleworks spreadsheet may provide the answer. 13

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● Bill Hill reviews three packages that provide page layout facilities. Is this the future of publishing? 29

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● Fast and efficient kitchen design with an Apple IIe based system. 32

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● Jenny Preece describes the rationale behind a package aimed at helping teachers select software. 35

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● A. Reicher provides the last word in bomb-proof input routines. 38

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● Before you rush out to the bookshop, read these reviews. Choosing accounting software and Visicalc are the subjects this month. 44

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● 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

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apple user

Volume 5
Number 10
October 1985

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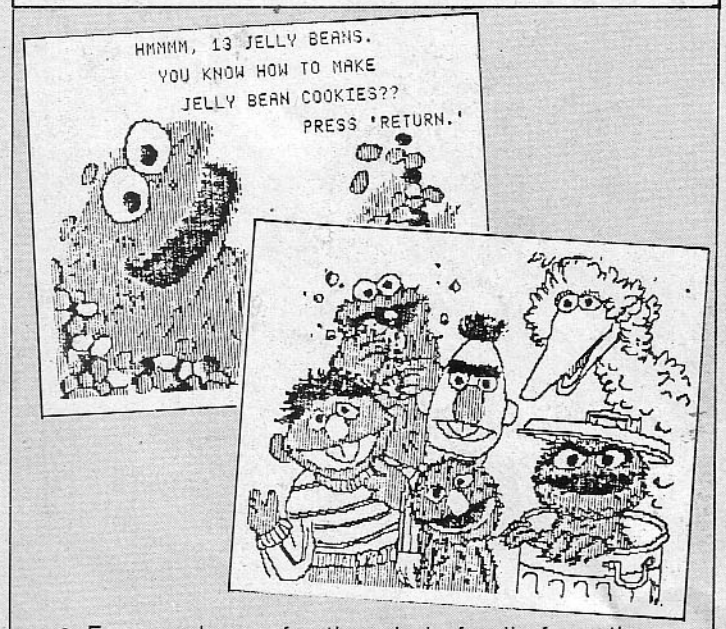

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Apple User Managing Editor **Derek Meakin** *Features Editor* **Cliff McKnight** *Technical Editor* **Max Parrott**
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Volume 5
Number 11
November 1985

News

● New drives and memory card for the II+ and IIe, new price for the IIc bundle, and more. 5

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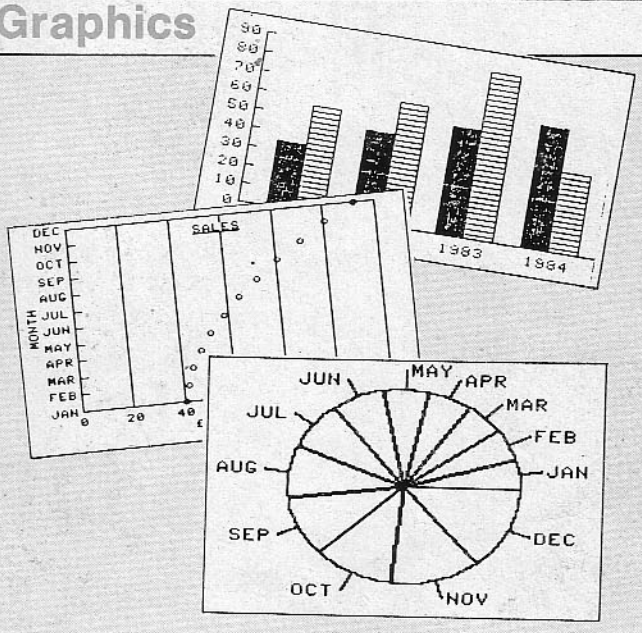

● It's the end of the road for the Apple User Graphics Library. Full details of how you can now get the complete series on disc. 10

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August 1982
Games review (Bandits, Suicide, Swashbuckler, Fly Wars) – Instruction file editor – Teach yourself Morse, Part I – VisiCalc section – Pastext 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.

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.

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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 IIe – 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.

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; Applewriter III; Geometry and Measurement, Drill and Practice; CLIP – News about Lisa and the IIe – 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.

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 IIe – Beginner's programming – Reviews (Omnis, Strobe 100 Plotter, Hilderbay Bookkeeper, Turnkey CP/M) – Programming for the classroom – Fickle Finger Proofing Part II. PLUS four pages of Compucopia and six 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.

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, Savvy, 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 Pilot facilities. PLUS five pages of Compucopia and eight Apple tips.

September 1983
Games reviews (Evolution, Wayout, Aztec, Crisis Mountain) – First impressions of Lisa – Think Tank – Reviews (Apple Interactive Data Analysis, FileFax, 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.

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 (Basicode 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.

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 1 – schools' software library. PLUS Compucopia, News, Letters and Appletips.

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 Tablet; Wildcard Plus) – 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.

January 1984
Hi-res text generator – Game listing (Patience) – Games reviews (Apple Cider Spider; Theseus 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; KGP-40 printer; AK-GC joysticks; Praxis 35 typewriter/printer; Visicalc Advanced) – Applewriter word counting. PLUS News, New Products, Letters and Appletips.

April 1984
Reviews (TK! Solver, Rapid Reader, Homeword, 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.

May 1984
Special report on the Apple IIc micro – Preview of Appleworks – 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 Applewriter's WPL – Reviews (PaperGraphics, Transitions, Mem/DOS, Ultraterm). PLUS News, New Products, 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 Applewriter's WPL – British games reviewed (Derby, Soccer Manager, Election, Necromancer, Mekbula) – 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.

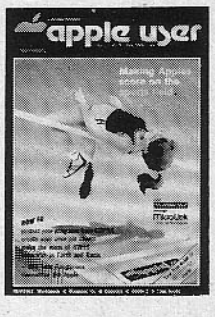
July 1984
Capitol CAD package – Automating CP/M with Pseudo disc drive – Wordstar on Epson printer – Relational Databases – Games (Lode Runner, Coveted Mirror, Crypt of Medea, Queen of Hearts, Quiz Listing) – Screensplicer – IIe super-res graphics – Pascal tutorial part VII (defining procedures) – Volume control for Apple II – Appleworks review – Lisa helping visually handicapped – Calculating mortgage repayments with Visicalc – PLUS News (including report on Apple '84), New Products and Letters.

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.

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.

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.

January 1985
John Sculley's View of 1985 – Games (Gelfling 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 ITT 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.



February 1985
Steve Wozniak talks about Apple II developments – Quicksort algorithm in Forth and Basic – Games (Deadline, Witness, Planetfall, Enchanter, Scorcerer, Expedition Amazon) – Graphics DIY part XI – Targeting with a 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.

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 1985
Apples in the dental surgery – Adding graphics commands to Applesoft – Using the VBLANK signal – Getting to grips with software – Reviews (Spee-Demon card, PFS File/Report for Macintosh, W-P-LAB) – Weather forecasting with Mac – Pascal Filer's D command – Fun and Games (La Triviata, Design Your Own Home: Architecture, Interiors, Landscape) – Books (Appleworks, VisiCalc, Machine level programming) – Index to Windfall Vols. 1 and 2. PLUS News, New products, Letters and Appletips.

May 1985
Sports Day runs smoothly with Apples – Graphics DIY Part XIII (pie charts) – Reviews (The Workbench, Macputer IIc, Copytext, Omnis 2 on Macintosh, seven Logo books) – The RWTS explained and demonstrated with a disc verify routine – protecting programs from Copya – Pascal (directory access from within programs) – Binsearch 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+/IIe, Musicworks for Macintosh) – Graphics (three books reviewed) – Mugraph: 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.

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 – Graphmagic review – Installing Wordstar – Business cash flow with Visicalc – Pilot review – Interactive editor-assembler, Part II. PLUS four pages of Compucopia and eight 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.

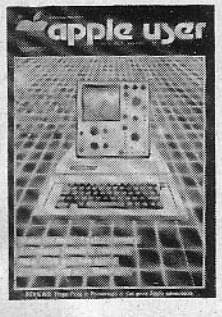
August 1983
Think Tank – Reviews (The Accelerator Board – tripling the speed of an Apple II; Microplanner Part II; The Ramview 80 and Vision 80 80 column cards for the IIe; SuperPilot – does it set a CAL standard?) – Games reviews (Kabul Spy, Super Taxman 2, Succession, Jaw breaker, Spectre) – III or 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.

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.

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.

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, Hallowe'en) – and DIY Graphics Part VII (including review of Doublestuff) – Macintosh (journalist's view of Mac Write, Software Development, Translyvania, 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.

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, Aquatron) – Graphics Part VIII (including review of Spectragram 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 CW/P drive – PLUS Letters, News and New Products.



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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 Printerrupt) – 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, Hitchhiker'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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