

ERG

QUARTERLY

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Sheffield S11 9FE
ENGLAND

() Renewal time.
U.S.A. \$2.00/3 issues
U.K. LOC + 25p stamps

Elsewhere..I trade for prozines on electronics,
sf, models, science.. etc. Write and make an offer.

MINI EDITORIAL

Apologies for a rather rushed job this issue. With going to the U.S.A. in Aug./Sep., I had to get as much of the magazine under way before departure. 8 pages were typed..and the superb Cawthorn coverillo were run off in July..probably before some of you got the July issue.

There's an interesting story behind the cover done by Jim Cawthorn. Drawn in 1962 for a Tolkien folio in Triode, this illo was originally titled "Against The Deeping Wall" but I took the liberty of replacing it with the ERG heading. The stencils have been hanging in my garage for 18 years, (is this a storage record ?) and with Jim's permission are re-used here. Daft thing is..superlative as the illo is, it is ineligibile for the McIntyre Award, as it is hand cut on to stencil. A masterpiece, but Rog Peyton won't accept stencils or repro artwork..so it just can't be put in. Now the good news...I still have several more in the series..so you'll be seeing them in future issues of ERG.

BADGES..Still a few of the ERG 21 Annish badges available..colour reduction of the cover of No.70. Send 30p in stamps. If you want a SOGGY badge, (in support of A.I.D.S. for the disabled) send 20p in stamps to Pamela Boal 4 Westfield Way, Charlton Heights, Wantage, Oxon OX12 7EW (and you can always send more as a donation if you like). COPIES of ERG 70, the 21st Anniversary issue..a few left for 50p in stamps. Orders to me, at the above address, except for the A.I.D.S. badge.

My thanks to this issues contributors ..and to Harry Andruschak who supplied the NASA paxover (I'm out of 'em now Andy)..also to all those who LOCed..but didn't make it into the abbreviated lettercol. Remember, if you haven't a sub to help you, you'll have to send a LOC, plus 25p in stamps for the next issue...in which I'll be starting 'THE BOSTON TEA PARTY' account of the Stateside trip.

Now that status box at the top. If it is blank, you're OK for the next issue. If it bears a X, then I'll need some response such as LOC and stamps from you. If it bears a \$ sign...then you need to send \$2.00 or a multiple thereof..or arrange a prozine trade with me. In case anyone wonders why those in the USA can sub..and in the UK not sub....simply because I can use the dollars..and the USA-ers can't send UK stamps in lieu.

QUERY...Can anyone tell me how much, and where ? For an electronic stencil cutting machine. I suspect they are up near the \$1000 mark, but I just might be wrong...well, I can dream. So when you sit down and write that nice long LOC (to make sure you get No. 73) don't forget to mention any source of such machines if you know of one.

So with that, I'll sign off..someday I'll tell you the story of my running battle with Luton airport. Best, Terry

ERG QUARTERLY..Now in its 22nd Year ERG QUARTERLY Now in its 22nd Year



HOME COMPUTERS

Microcomputers are invading every activity from selling football tickets, to handling the household budget (and with suitable peripherals, they can also operate much of the household gadgetry).

Elsewhere in this issue, Ralph Roberts tells how he uses his CHIEFTAIN for story writing. The micro doesn't conceive the story - the writer still has that chore; but it can perform alterations, corrections, rephrasing of word, sentence or paragraph or shift them to a more suitable order as may be required. When you knock off for a coffee break, or long holiday, the computer will store your brainchild on a floppy disk or cassette until you get around to finishing it. When that day comes, and a neatly typed copy will shoot out at the touch of a button, all ready for mailing to the editor...and no doubt the day will come when via a phone link to his office the editor's computer may talk to yours and display your story on his VDU for quick vetting before printing it out right there in his office. If you want another copy, simply press the button.

Try and learn about computers, and you run slap bang into jargon. That VDU back there means 'Visual Display Unit', and is the TV-like tube which shows what is happening. By dint of much reading of books and allied magazines, I'm gradually getting the hang of it all...so here's a summary for those who are interested.

Computers come in two main kinds...Analog and Digital. The analog variety solves its problems by simulating their parameters. A common analog device is a two-handed clock where the angular movement of the hands is interpreted as hours and minutes. A digital computer is the (number crunching) model most home computer buffs will handle. You feed in the numbers and the machine does the rest...assuming you have programmed it correctly. Digitals work on the yes/no principle, using the binary number system. A computer could be made to cope with the ten states of decimal.. but binary is easier..and cheaper. If a circuit is 'on'..that means 1. and if it is 'off', that means 0. Which covers the two binary digits. For a fuller explanation, see ERG 25. Apr. 1966, or A MICROPROCESSOR PRIMER in this issue's reviews.

Unless you're a computer nut, you can forget all the interior gubbins of arithmetic unit, central processor, buffers, etc. Likewise, you won't be interested in feeding your micro from a punched tape or assorted sensing devices as in industry. You'll be using a typewriter keyboard.

INPUT COMPUTER OUTPUT



Similarly you'll want the computer output in the form of a visual display on a screen. Most (but NOT all) modern micros follow this pattern as shown on the left, with the integral keyboard and VDU. Some save cash by feeding your TV instead of a VDU.

The Computer section comprises various devices within its 'black box'. Microprocessor, arithmetic unit, clock etc..but the only two points which need concern you at the moment are the memories, ROM and RAM.

ROM (Read Only Memory) is the permanent, built-in instruction set which covers standard operation, language, and tells the computer how to get cracking when you first switch on.

RAM (Random Access Memory) is the part which stores your facts and carries out your immediate instructions. It needs re-filling each time you switch on the computer.

Sooner or later, you'll run into PROM (Programmable ROM) which means you can put in your own permanent information...and EPROM (Erasable Programmable ROM) you can change the permanent memory when you wish..but at the cost of buying things like ultra-violet erasing gadgets.

As one might expect..the bigger the memory..the bigger the cost. A small computer may have 4K ROM and 4K RAM. ...so what is this 4K business? Remember computers work in binary digits ?, well one Binary Digit is called a 'bit' and K signifies a thousand...so 4K means that memory can handle four thousand bits of information. There is some ambiguity here, as eight bits make a 'byte' and some manufacturers claim..say.. 4K bytes in ROM..so you have to check when one model has..4K ROM or 4K bytes...it could be sheer sloppiness in the advert..or one could have 4000 bits space..the other 32000 bits available. It makes a big difference..so if in doubt...ask.

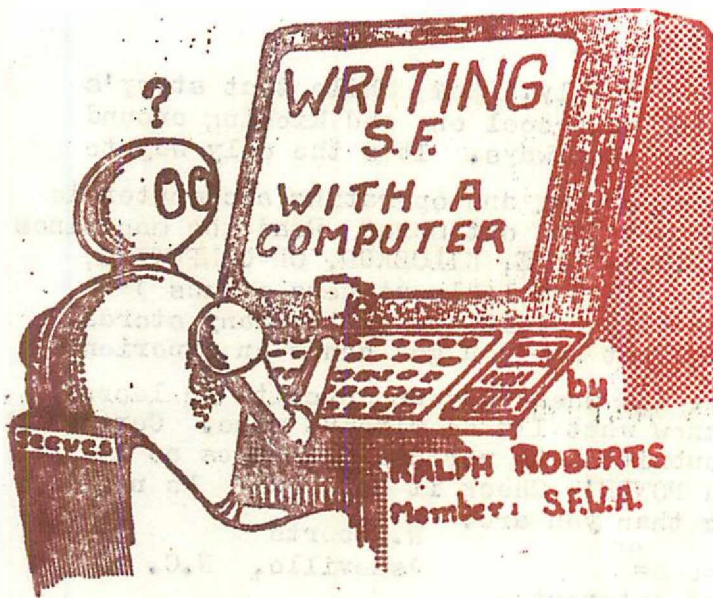
Since a computer works only in binary, its instructions must be inserted in that form...such as 01001101 (Part of such a number is used to address the input to the right part of the computer). If you had to type in many such numbers, errors would creep in..and be hellish to check. To make life easier, you can type in words or abbreviations instead and the micro will convert 'em into number code. Such words and abbreviations are the computer languages..you may have heard of 'em. ALGOL (ALgorithmic Language) COBOL (COMMON Business Oriented Language), FORTRAN (FORmula TRANslation) and the ubiquitous BASIC (Beginner's All-purpose Symbolic Instruction Code) which 99.9% of home computers seem to use because it is relatively easy to learn.

Hand in hand with learning BASIC, you will (probably) start to make up simple programs and subroutines. The program (Internationally agreed spelling for computerese..NOT 'programme') is the series of instructions which the computer follows. The subroutine is where, having reached a branch (If this, DO that) point, or a place where an often recurring operation has to be performed (say finding a square root), the computer steps off the main programme, performs the subroutine and returns to the main program at a specified point.

Having made up (or bought) a program and typed it into your micro, you can save time in typing it in each time you want to use it (it wipes on switch-off remember) by transferring it to storage..either on a standard cassette in a recorder, or onto a 'floppy disk' These are 5" or 8" oxide-coated discs..they cost a lot more..but can store more..and have much quicker access time. Some micros come with built-in cassette recorder..others can be cable-linked to your own machine.

Finally, if you want a printed copy of your results..you'll need to shell out upwards of \$300 on a printer...and here again, the higher the higher the price.... and speaking of price, if you turn to page 7 I have summarised a few of the more popular models to give you some idea of what to expect...but shop around..specifications vary and costs fluctuate...

Please turn to page 7



In one corner of the dining room, my secretary sits patiently in a small brown box. She never complains and takes no coffee breaks. She types 360 words a minute and never gives me any lip. Seven day work-weeks don't faze her in the least. She's my personal computer.

Science fiction writers have predicted for years that computers would soon play an increasingly meaningful role in our lives. Well, as Honeywell say in their ads, "that day is today." Thanks to the technological explosion engendered in large part by the

Apollo Lunar Landing program, the price of computer hardware has dropped to a point where hundreds of thousands of people can have personal computers in their homes.. and do so. I'm merely one of many thousands who started with personal computers as a hobby and then found a practical use. In my case, writing science fiction with a dash of fantasy now and again just for seasoning.

The Large Scale Integrated circuit (LSI) is the device that has made this revolution possible. Thousands of transistors and other electronic components can be crammed into a tiny chip whose case is smaller than your thumb. This makes feasible my little brown box of a secretary, (a Chieftain microcomputer with 49 kilobytes of memory and two disk drives). What's more, having a computer is like the six-gun in the Old West, it's an equalizer. A short weak man (say like Billy the Kid) who was fast with a six-shooter, had nothing to fear from big men. He could walk tall and proud unless, of course, he met a big man who could draw faster than he.

But to complete my analogy. With a computer, a part-time writer, (say like me) who still has to work for a living, can turn out an immense quantity of work in his spare time. And take it from me, the only way to break into the pro ranks is dogged persistence. Unless you're Robert Heinlein and in that case, you don't need to be reading this anyway.

Word processing is the name of the game. I tell the computer to open a file and start writing my story. Forget the disadvantages of the greasy-gearred typewriter. I write one word after another and see them displayed on the CRT screen before me. I grandly ignore such irritating little details as line length, page number, changing paper, etc. Just write one sentence after another. Finished with the story or portion for the day, the computer stores that particular file on a floppy disk. Floppies are small disks (either 5 or 8 inch) coated with a magnetic surface. The computer can record or retrieve a 5000 word short story in mere seconds. You can also go in and make additions, deletions, correct spelling, and so forth. Makes rewriting a snap. Replaces lost manuscripts with the greatest of ease. The story done to my satisfaction, I ask the computer (my secretary) to type it up. She does. Typewriter quality at 360 words per minute and she determines line length, how many lines to a page, page number,

when to start a new page -- all automatically. Me? While that story's printing out, I'm somewhere else drinking a cool one and kicking around ideas for the next blazing saga of the spaceways. It's the only way to write.

Contrary to popular opinion, owning and operating a computer is both simple and inexpensive. How do you find out more? Read the magazines devoted to small computers (In the U.S.:-- BYTE, KILOBAUD, ON COMPUTING, INTERFACE AGE, and several others are all available at news stands)** Also, if you live in or near a large city, visit one of the many stores specialising in personal computers. That way you get hands on experience.

I hope this little article has whetted your appetite to learn more about home computing. Don't know what I'd do without mine. Certainly wouldn't have over eighty stories submitted to various magazines as I do now. A personal computer gives you POWER! Check it out, huh? No need to let Harlan Ellison be more prolific than you are.

R.Roberts

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Asheville, N.C.

**(Editor's note.. U.K. magazines of interest:-

EDUCATIONAL COMPUTING, PRACTICAL COMPUTING, ELECTRONICS TODAY, etc.

You can get a full word processing set up..PET computer, disk drives, printer and program for \$3250 from the Comp. Shop. T.J.)

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ALIEN NAMES MADE EASY

by

RALPH ROBERTS

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I've seen several ways recommended as regards thinking up names for SF stories. Two of the most popular are the 'phone book and cl'nan Webster. With a little juggling and transposition of letters

you can garner some pretty decent and usable names from these sources. Time consuming though, and a lot of writers don't seem to make the effort. I see a lot of pieces in the major mags with all the characters having Anglo-Saxon names. Five hundred years in the future? Maybe. But don't count on it. Certainly lacks an air of futuristic authenticity, eh? Developing a believable name for an alien, being or place...hard work, I wanna tell you.

Being into personal computing, I decided to let the computer do the work. I got the idea, admittedly, from an article in PERSONAL COMPUTING magazine. I've elaborated the original program considerably. ("Fine," you mutter. "But what the heck does it do?") What does it do? My friends, the computer will randomly generate several hundred different names in less than a minute. I glance down the list and pick out the one that best fits my story. No time wasted, and better quality names than messing around in the phone directory.

Since the program follows certain linguistic rules (example: Constant-vowel-constant-vowel in a simple pattern) they are almost always pronounceable. And they have that unique Alieness about them that is often hard to achieve. I have about ten different patterns as of the moment. The following is a sample to the pattern CVCVC. Anyone wanting a longer group can send me a SASE for same. Time permitting, I'll be glad to send them, if you have access to a computer using BASIC, you can have the program listing....Now that's a deal...keep right on writing.

Ralph Roberts P.O. Box 8549, Asheville, North Carolina 28814, U.S.A.

HERE ARE YOUR ALIEN NAMES.....to the pattern CVCVC

Pudot	Zonef	Zurez	Butez	Ridal	Pusos	Xavov	Supac	Suxash	Dabek	Vonaf
Xizon	Tecov	Kazim	Pakex	Maxis	Bafic	Zobaz	Vovub	Caxab	Feduc	Tasul
Kanun	Kitef	Vuzot	Mexab	Kekag	Luzox	Ritech	Tecosh	Gusith	Fivosh	Shozi
Thuvof	Manit	Lunez	Guthak	Godux	Churish	Lomal	Tates	Zuxel	Keshid	Bezib
Vifeg	Gogot	Goxez	Bocid	Ilachuc	Dudax	Zozuk	Taxat	Bazoz	Chugosh	Repam
Nired	Nitem	Thaguv	Pethas	Shifed	Sabek	Vupec	Kezop	Marish	Gishik	Dozin
Voches	Lixef	Fazid	Shicut	Xenich	Xedoth	Vuril	Chafar	Shisuf	Kanid	Nocaf
Guvul	Vuzuc	Pachax	Novuch	Shilul	Puliv	Xenem	Xagach	Lozib	Kaxen	Rorid
Teshim	Xathuc	Goshif	Shosos	Chevug	Thafer	Golush	Tigon	Chebog	Doxig	Zitib
Gother	Zithav	Nodoth	Dashir	Thudaz	Rexeg	Sorib	Zotan	Pudax	Goduf	Kegol
Shecez	Shifen	Nichuz	Chutha	Shopac	Taluv	Kathuz	Boxel	Litash	Guxip	Tebat
Kazith	Zixex	Nochul	Tevux	Kerosh	Xaloth	Bushix	Fezio	Gucan	Xatech	Nobus
Tanoth	Mugoc	Duzof	(the original list fills a full page, and I may have made a spelling mistake on one or two up there. T.J.)							

The above names were randomly generated on a Chieftain Computer. R.Roberts.

Continued from page.4.. SOME CURRENT (June 1980) PRICES

Computer Model

SINCLAIR ZX80	1K bytes RAM (claimed to equal 4K in other machines) Computer and calculator style keyboard only. Interfaces directly into your home TV and cassette recorder. KIT...£80 BUILT...£100 POWER UNIT...£9
ACORN 'ATOM'	2K RAM 8K ROM Typewriter keyboard, interfaces with you own TV. KIT £120 BUILT...£150 +VAT P.U.£10
SHARP MZ80K	4K ROM 14K to 48K RAM as required. Has built in VDU, cassette recorder and typewriter keyboard, plus a built in music function. From £520 upwards
TANDY TRS 80	4K RAM typewriter keyboard and integral VDU will interface with cassette recorder Price £365
APPLE II	16K RAM has no VDU, so you need to buy a monitor Basic machine costs £695 9" Monitor...£127 or if you want to use your TV, and interface costs £14
COMMODORE PET 2001	16K RAM plus integral VDU and cassette. Typewriter keyboard. Price £475
EXIDY SORCERER	16K RAM...no VDU so you need a monitor. Basic price...£740 Monitor...£240

PRINTERS cost from £300 to £500 or even more for top quality
DISK DRIVES start at around £200 and can rise into the thousands.

A COMPLETE WORD PROCESSING set-up for authors comprising a Pet 32, twin disk drives, an NEC Spinwriter and the relevant ROM and program costs £3250 plus VAT.

IF YOU DO GET INTERESTED..remember

1. Read books and magazines to learn all you can before shopping
2. Decide WHAT you want a computer to do for you ..is it worth £x00 ?
3. Set a price ceiling BEFORE shopping and don't change it without knowing what you're getting. ...have fun..Terry

VIDEOCORDING



by

Alan Burns

Seldom have I written an article so likely to be out of date by the time it is printed, but videocording is in a state of flux, with no standards and rather clumsy and expensive equipment. But I can confidently predict that come a year or two, moviemaking as we know it will be dead as the dodo, even still photography will go the same way and be the hobby of a few nostalgics, even not those unless some firm continues to make films, and processing kits, which is quite unlikely.

Why so? Well videocording has, even with the present state of the art, overwhelming advantages, compared with film photography, which I shall abbreviate to FP and its successor VC. Consider FP. You have film which once used can never be reclaimed. A blank frame, a duff shot, out of focus, camera shake..all these faults--with skill, minimised, I'll admit, you are stuck with once the shot's taken. With VC, you simply check what you've taken on a mini-TV. If you like it, then that's it. If not, erase and do it again. Now I admit that a present day vidicam with power pack and perhaps a miniTV for checking weighs a bit more than a movie camera outfit...remember the first lightweight cameras..only twenty six porters needed to carry the equipment for subsequent processing? With VC. processing is done with the filming.. goodbye Polaroid. Very well then, that is the making part of VC films, for the projecting on your TV the ads will tell you all the advantages of that.

Disadvantages ? Mainly because of the state of the art. You can't edit unless you've another videorecorder, and quite possibly VCs will be a part of the TV as much as the tube, but my fancy is that they'll be optional, so you'll have your portable camera and then bring your efforts home and edit them on the house recorder. Auntie could come round in the evening and see how she behaved at her niece's wedding that afternoon, complete with sound effects et al. Ch, and don't forget that three hour duration of the VC cassette, no hasty swapping films in the middle of the toast by a tiddly uncle. Another disadvantage at the moment is the variability of the tape quality. One tape can be full of light flash, another won't have any, but that's the state of the art again. Another disadvantage is the business of copyright, it's much the same as for tape-recording, but until the mess is ironed out, read the small print and act accordingly.

At the moment, there are three systems on the go, which I'm sure will be standardised in a year or so. The most common is Video Home Service (VHS). Then there is Betamax, and finally there is Phillips. The Russians have produced an experimental VC whose quality, so I am told by one who has seen it, is not up to much..but probably they are wisely sitting on the sidelines, ready to leap in when we've sorted things out, and make a killing as they've done with their Quartz movies and Zenith still cameras. Again, state of the art, it isn't easy to make copies for your album from VCs. You've all seen the stills on BBC. Most BBC productions are videocorded as everyone knows, and frankly, the state of the art, I wouldn't like to tote

a vidicam up Mount Everest, even if it doesn't need a couple of Sherpas.

Now quite honestly, at this time FP has the edge over VC in quality and convenience, but a lot of wise men are photographing their home movies on to videotape, and discreetly getting rid of their movie gear while there's any market for it. Anyone wanting to buy a Standard 8 outfit with editor, sound projector and screen, reels, and bits and pieces. Going cheap?

*****Alan Burns*****

A FEW MORE FACTS by

Terry Jeeves

As a confirmed cine addict of 20 years standing, I can't let Alan get away with all he says about VTR versus film..so herewith my two cents worth.

First, Sony originated the Beta format in the USA with machines that could hold an hour of tape. Then Matsushita came up with the VHS format, and at RCA's request extended its running time to 4 hours. Sony went back to the drawing board, reworked their system (plus auto changers) and the war is still on..so point one..don't jump in too quick or you might find you backed an obsolescent system. ?

As Alan says, VTR (Video Tape Recording..or Recorder) can handle much longer programmes. If all you want is to sit and watch, then it is FAR superior (apart from quality) than film. Video can cost you about £10 an hour in tape.. whereas film costs about £60 for the same period.

However, there are other factors..and higher costs of ancillary equipment. Alan mentioned BBC documentaries...well how about this... The Beeb does NOT film then on VTR..they usually use 16mm. They use VTR for spot news, interviews and the like.....but, when the Atlantic Yacht race came up, they ignored VTR..too bulky, poor quality, erratic in operation.. and they costed up for 16mm and found they would have a bill for £100,000. Undaunted, they invested in some Super 8mm CINE equipment and kitted out the competitors..at a cost of £500. Came the Round the World Race in 1977 and they went back to Super 8mm again and did the whole job, covering nine contestants for a total of £4000. Add to this the fact that hitherto, the BBC had totally shunned the 8mm gauge and you have a real picture of how reliable, useful and costly VTR really is...and the portability and low cost of 8mm film.

Herewith a few prices. A home VTR machine will cost between £500 and £800, (a sound film projector, under £200 and you can get 'em in handy, sideboard-sitting TV styles too. A colour video camera costs from £400 but the 8mm version starts at around £30 or even less. To film outdoors on VTR you will need to spend a further £x00 in 'portable' equipment weighing around 4 lbs (and don't count on that weight being cut down much..most of it is battery gear, and even with NiCads it is still heavy)..cine cameras weigh around 2lbs or less.

Then there's quality. It is a sad fact, but film FAR exceeds VTR in this department...and since with VTR the final product must appear on a 625 line TV screen there is just NO PROSPECT of this being improved in the foreseeable future until our home TV system is upgraded.

Oh yes, editing..those flash frames, out of focus bits and suchlike that Alan mentioned. Firstly, he suggested re-shooting a duff scene..quite feasible..if you have actors on tap..otherwise, you are stuck with what you

managed to get. In my files I have Concord landing, closeups of the Queen and even a film, shot in Italy, of a yacht being driven on to the rocks. Now even with VTR I doubt whether I could ask for a repeat of any of those shots just to suit me. No, VTR is like film..you're stuck with what you have unless you can afford to pay for re-enactment. When it comes to those 'flash frames' (single frames where the light meter didn't close up fast enough)..with cine you just clip 'em out and resplice the film. With amateur VTR, they STAY THERE for ever..you just can't edit 'em out on home gear..not even if you borrow your mate's gear as well. If you want to buy professional editing gear, you're up in the thousands of quidlets. Moreover, if a film breaks on projection, you just resplice it. If VTR breaks, you have problems. Remember it has to wrap around several tape heads revolving slantwise across it at high speed...splice it like ordinary tape and when the splice hits that complex you are likely to do some expensive damage if it isn't perfect.

Then again, I'm interested in making animated, stop-motion films. This is currently (and likely to remain) impossible on VTR. You can't stop and start those revolving heads every 'frame'. The same applies to those fascinating time-lapse shots where you watch a seed grow into a plant or a flower bloom. Since these involve single shots at discrete intervals..they also are OUT for the VTR fan.

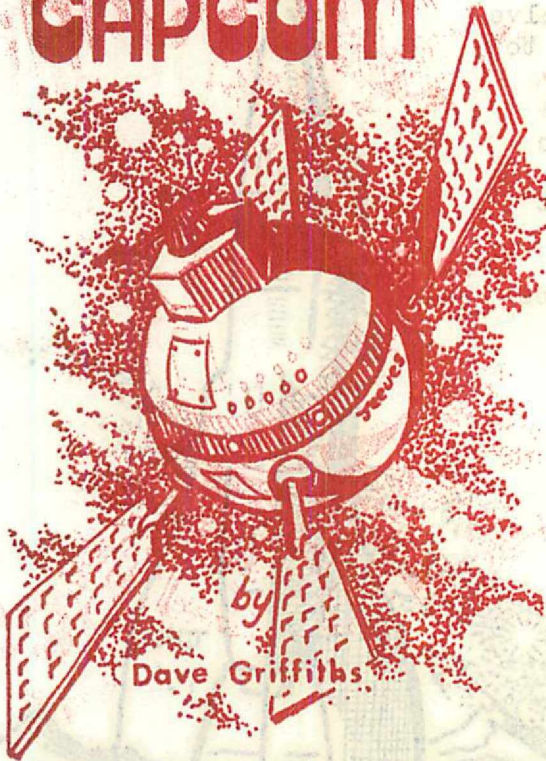
And servicing. (Alan quoted a lamp at £10)...In 20 years of cine, I have never spent a penny on servicing of cameras or projectors..I started with a Kodak turret lenses camera (superb), then a Quartz M, then a Quartz 5 (which I still have) plus a Maxius and an Agfa Movex. I had an Eunig P6M for 12 years (it coupled to my tape recorder for sound). but eight years ago, I changed to a Eunig S710D sound projector. Not one item of this gear has ever malfunctioned. My sole costs have been new lamps...I just put my first new lamp in the S710D...it cost £4 and had lasted me 8 years..and its replacement cost £4 too! As for VTR..all I know about those costs is the fact that we had a Phillips machine at my school...and the heads were nearly always giving trouble..so much so, that at one period they ran out of money in the kitty to keep the machine operational.

Then there's sound. I film silent, and add sound once I have my film edited into final form. This way, I get top quality...but at the cost of lip-synch, talkies. Oh, I could buy a sound camera..but having heard them, no thanks. The same fault applies to VTR. Unless you are making films, mainly indoors) live recording (VTR or cine) is beset with perils of poor quality, fluffed lines, extraneous noises of cars, aircraft etc. A friend of mine put one 'live sound' sequence in a holiday film..and it stands out terribly because of the poor quality and background noises.

Heck, you'd wonder how VTR ever got going...were it not for its one great undeniable (and verging on the illegal) ability to record a full length feature off the 'box'. Summing it up..if you are not concerned with quality beyond TV level, and only want to watch programmes (as distinct from creating them), then VTR is for you. It gives you maximum convenience and the ability to 'time shift'...move programmes to a more convenient viewing time. If your physique (and bank balance) will stand it, you can even take some tatty, unedited holiday movies..or Aunt Agness mumbling in a naudlin manner into her wedding champagne.

But if you want to plan, create, edit and build your own film complete with spot sound effects and all shooting errors removed...then go out and buy cine...it'll be around just as long as people want to do their own thing..as will still photography. Heck, we still have artists and paint brushes..photography was supposed to kill them off. Terry Jeeves.

CAPCOM



It has been said that a bad fairy at a christening would utter the curse, "This brat will grow up to be a politician; nothing he does will be for its own sake, but because of the effect he wrongly thinks it will have on something else." Events over the past few years suggest that the current NASA administrator is just such a politician.

During testimony before the Senate Space Committee, ex-Apollo 17 Astronaut, Harrison Schnitt (now a Republican Senator for New Mexico) challenged the record of the present NASA leadership because of what he has correctly described as its lack of vision and general reluctance to exploit the Shuttle. Administrator R.A. Frosch replied that he thought there was a commitment, but the problem lay in getting the budget right. Schnitt countered this statement by pointing out that the only real U.S. commitment to space, was to complete the Shuttle and that other nations and societies were becoming increasingly

interested by the opportunities in this area. Dr. Frosch dismissed Schnitt's comments by claiming that the only real interest shown by another country to date, was China's purchase of a couple of U.S. satellites. Schnitt then reminded him that there exists a place called the Soviet Union which is not only quite active in space, but extraordinarily interested in expanding its future capabilities.

In later testimony Dr. Frosch, apparently unperturbed by Schnitt's observations, outlined his views on manned space stations in Earth orbit with what must surely have been one of the best examples of bureaucratic gibberish to have passed the lips of a NASA administrator...Quote:-

"I can see it as useful for learning what it's useful for, but I don't think we have a demonstration of what we would do with it at this point." Dr. Frosch has expressed similar views regarding the use of the Shuttle for space industrialisation, solar power satellites, and materials processing facilities. Rather than attempt to stimulate research in new areas, the Frosch administration is leaning towards a utilitarian space programme which could eventually reduce NASA to the role of a mere satellite launcher..originally intended as but one of its capabilities.

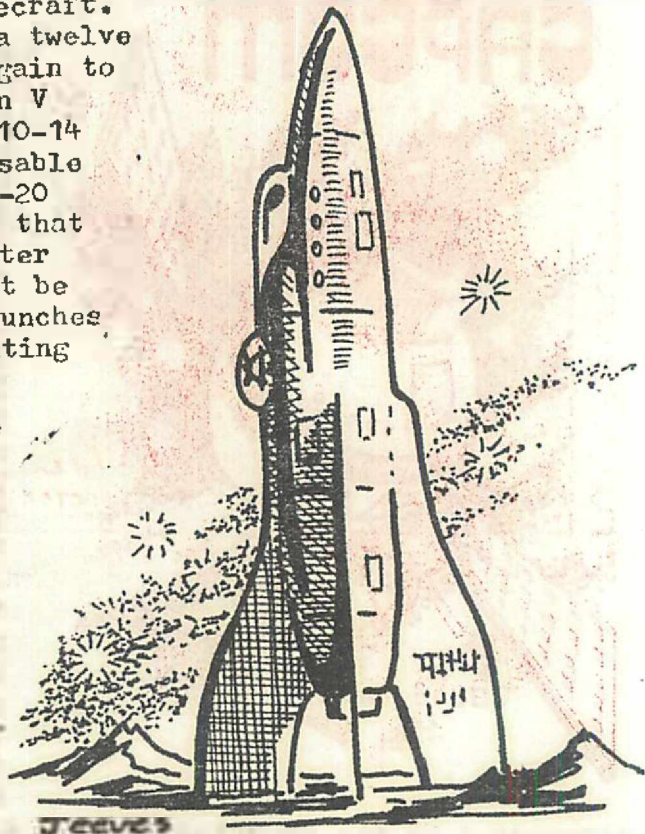
In almost direct contrast, the Soviet Union has been increasing its own space programme funding by 3-5% each year. Today, they are credited with having 100,000 scientists and engineers devoting their efforts largely to space. These scientists and engineers produce three completely new spacecraft designs every year, and a new booster every five years. Following the success of their Salyut 6 space station they stand on the brink of launching what could be a permanently manned station. Salyut 7, next in the series is expected to have more than its predecessor's two docking ports. This will enable the Soviets to increase the station's habitable volume by plugging in additional modules..without sacrificing the ports required for

the Soyuz ferry and Progress tanker spacecraft. They are also believed to be developing a twelve man military/scientific space station (again to be crewed on a permanent basis), a Saturn V class booster with a lift-off thrust of 10-14 million lbs to launch it and a small reusable Shuttlecraft reminiscent of the Boeing X-20 'Dynasoar'. Current estimates indicate that the first launch of the Soviet superbooster could occur as early as 1983 (It will not be man-rated) and assuming that the test launches prove satisfactory, might result in orbiting a 12 man space station by 1985.

Having accomplished this, the Soviets would find themselves in an excellent position from which to launch manned, planetary exploration missions, specifically to the planet Mars.

At a time when the vast majority of Western communications and defensive warning systems lie in space based equipment, the domination of this area by the U.S.S.R. could result in the kind of technological coup that would leave us all open to nuclear blackmail. If that happens, Afghanistan will be just the beginning.

Dave Griffiths.



Y O R C O N "2"

THE Easter Weekend Convention for those who want to meet up with old friends, make new ones, have fun, see films, buy books make whoopee, or whatever.

Make a note of the dates... April 17-20 1981

Remember..it's at the Dragonara Hotel in Leeds (NOT York)

Want to join ? Send £3 supporting, or £6 attending. (Cheques etc. made payable to YORCON). Send your money to:-

Graham James
12 Fearnville Terrace
Oakwood
LEEDS LS 8 3DU

Val and I have registered to attend, so I hope we'll be meeting all those folks I've missed out on over the last few years while saving for Noreascon in Boston.

Don't put off registering..prices go up by £1 at the door.

Remember...YORCON 2 Dragonara Hotel. Leeds Apr. 17-20 Room rates are £8.50 + VAT for each person sharing a double room and £12.50 + VAT single.

Any queries, write or phone (0532 721478) Graham at the above address.

See you all.



Just a few notes on some of the more notable fanzines to arrive here...not all of 'em by any means.

THRUST 15 Doug Fratz, 11919 Barrel Cooper Court, Reston, Virginia 22091. 6 for \$9.00 (\$11 elsewhere) 56 superbly lithed pages of literate comment, excellent art, photos cartoons etc. Material by 'names' such as Sheffield, Bishop, White, and interview with Freas, another on board games, plus loads of other goodies. Serious, but not stuffy with a lighthearted touch. This hits the mark that Vector misses completely.

VICTORIA VAYNE. P.O. Box 156, Station D, Toronto, Ontario, CANADA M6P 3J8 sends a package of goodies:- **DMQ.24** (5/\$2.00) 22 pages of news, letters, fun and lighthearted comment. **TYP0 9** rides with it..an 8 page letter zine, also available for trade or LOC ..and the giant **DMQ 25** (delayed because of its size)..letters, fnz reviews, humour from John Berry, a neat 'costume' piece by Tanal, good artwork..oh yes, and even a 'record' of Tucker's guest speech on...cardboard. Well worth the money if you're a lighthearted fan.

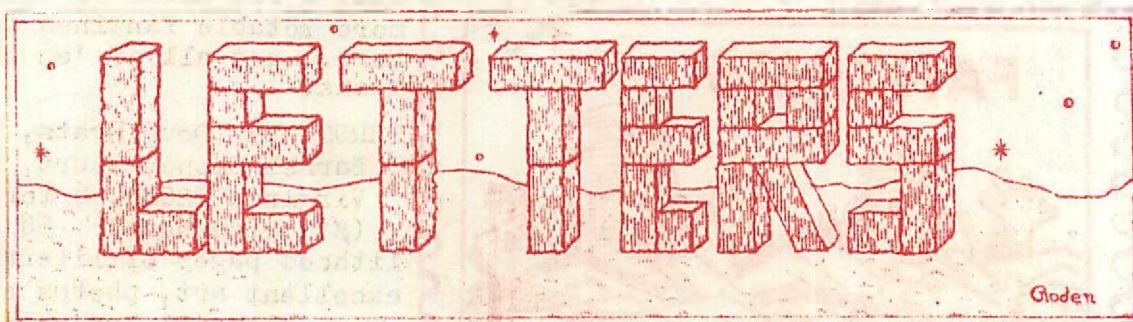
GROK 9 University of Manchester SF & F. Soc. Students' Union, PO. Box 88 Sackville St. Manchester. 48, A4 pages. sparse but goo, artwork. Fiction, letters, short and in-depth reviews, interviews and an excellent article on energy problems et al. There's a con report as well. Price 25p and that makes it the best buy around. Literate, entertaining, but not stuffy. VG!

SOLARIS 33 For those of you who speak (or read) French, this is a prozine standard zine, 44pp, superb illos, reviews, articles and news, 6 issues for \$10.00 overseas from Norbet Spohner, 1085 St. Jean, Longueuil P.Q. Canada J4H 2Z3. Oh yes, there's fiction and an art portfolio and....and....

PHOSPHENE 8 56, large sized superbly mimed pages, excellent artwork, and letters, comment etc.. PLUS a hefty photopage supplement which alone makes the issue well worth having..throw in the rest, and you can't lose. It's been a while since the lastich..but worth the wait. For LOCs, artwork, 'the usual' or \$2.00 from Gil Gaier, 1016 Beech Ave. Torrance, CA 90501, USA

ARECIBO 9 Another hefty (46pp) zine jammed with comment, interview, humour fnz reviews, book & film reviews, rock music..upcoming movies, letters and artwork. Loads of very good artwork, and all for \$1.25 in USA or \$1.75 elsewhere..write 'The Gang Of Three, 9800 Gentry, St. Louis, Miss 63125... hey there folks..my daughter is currently attending Principia U just over the border in Elsah, Mr. Alton.. small world...if we come visiting her we may meet up with you all.

SHAGGY 76 The good old zine revived...officially the OO of the Los Angeles SF Soc..under a new editorship..this one is free..in future, \$1.00 or \$2.75 for three...write to LASFS Inc. 11513 Burbank Blvd, North Hollywood, CA 91601. Reprints, history and plans for Shaggy, comment, etc...try it huh? (Oh yes... some call it 'SHANGRI LA AFFAIRS'...they want LOCs and art too)



Alan Burns
19 The Crescent
Kings Rd. South
Wallsend

Your model-crit is something new, more of such please. Actually if the wife wouldn't beat me around the head I'd like to have a try at HMS Victory in..could it be 1/32 scale? Our local art shop stocks thousands of kits for everything from Roman Chariot's to the Cylon's base. Anyhow, the finished model would be about 2' 6" long. To press on, Eric Needham, funny but original; Lit. Crit, usual good standard. (((I make the models, display 'em for a while then either relegate 'em to den, garage or give 'em away)))

Arnold Akien
6 Dunblane Rd
Seaburn,
Sunderland
Tyne & Wear

Is your standard of cover art for ERG always so high? I must admit I had thought that the beautiful colour cover on your anniversary issue was an exceptional effort..but No.71 was no drop in standard. I think you must have done it this time as it was signed 'Jeeves' rather than Keef Jeeves'. (((Jep, son Keith did the superb job on 70, and I did the one for 71. Glad you liked 'em))) The punchline at the end of Eric Needham's story transformed it from what had seemed a rather strained and overlong joke into a quite clever short story. Surprising the difference a few words can make isn't it?

Bernard M Earp
21 Moorfield Grove
Tonge Moor
Bolton
Gtr Manchester.

Good cover. My imagination can carry that scene on, It really moves for me but do you really think a table of contents is right on the cover..and in red ink as well. It detracts from the composition. (((My boob, I drew the illo 8" deep instead of 10"..so had to fill the empty space somehow))) I was talking to a teacher at a local art school and they've had a cassette video recorder for quite a while. After 25 playings the cassettes fell apart! Another gripe is the publishers of the so-called 'Doc' Smith 'Tedric' Books. They ought to be taken to court for false labelling or wrongful advertising..they ought to put.."By Gordon Eklund, after 'Doc' Smith" or whatever. Of course, that wouldn't sell many books would it? (((When the first 'Tedric' appeared, I wrote and asked Wyndham who had written it..as 'Doc' was dead, and this wasn't his 'Tedric'. They never replied. The same things happens with the Family D'Alembert rip-offs and such rubbish is giving Doc's better stuff a bad name. YES..he did write better stuff..gqd nuts to the trendies who say he didn't))) One point, you review old books as well as new. O.K. but couldn't you say the date of first printing to enable the reader to place the book in its correct perspective. (((Good point..I'll try to do this...see the 'Golden Oldies' page in this issue.)))

EDITORIAL NOTE..letterspace a bit tight this issue..will try to expand it in Number 73. This time, everything came in at once. T.J.



THE PLANET MASTERS

Allen Wild
Sidgwick & Jackson
\$6.50

Larson McCade comes to the status-hunting world of Seltique in search of the long-lost, all-powerful Book Of Aradka. Since McCade has some of the exotic powers of Gilbert Gosseyn and the novel a touch of vanVogt in its development his encounters with would-be assassins and the other characters who cross his path, is both exciting and intriguing. There are times when McCade seems a bit too omniscient, with the city too much his oyster, but this never gets in the way of a first class story. Interest is never allowed to flag in this first novel of considerable power. I enjoyed it immensely and suggest you watch out for the name of Wild as a rising star in the SF firmament.

THE WEB BETWEEN THE WORLDS

Charles Sheffield
Sidgwick & Jackson \$6.95

Since the basic plot involves a 'bridge' from Earth to synchronous orbit (and beyond), it will inevitably be compared with Clarke's 'Fountains Of Paradise'. I feel pretty sure the idea would bog down in the angular momentum bugaboo which demands energy to be put in or subtracted from the system depending on which way you travel. Otherwise, this is the tale of top level engineer Merlin, hired to build the bridge by filthy rich, but cancer ridden Regulo. On the side, he is also seeking the reason for his parents' deaths, plus the mystery of the tiny, humanoid 'Goblins'. Throw in the intelligent, giant squid Caliban, the computer Sycorax and the sinister doctor Morel, then a few other goodies and you have a rattling good yarn. The characters are a bit rigid at times (Corrie seems to hide in a cupboard between appearances) but there is plenty of suspense, and a sting in the tail. If you liked 'Fountains'...get this.

THE SNOWQUEEN

Joan D Vinge
Sidgwick and
Jackson \$6.95

Tiamat orbits a Black Hole and has a 150 year Summer/Winter cycle, changing its ruler each cycle. Queen Arienrhod (who never ages thanks to drugs taken from the sentient 'mers, plans to survive the change by planting clones to maintain her rule. Only two survive, Moon, a replica of Arienrhod and Sparks, Moon's lover. Things go awry when Moon is accidentally taken off world and through the Star Gate. The Queen seeks vengeance on those she deems guilty, and enmeshes Sparks in her toils..then Moon returns to fulfill her destiny. A blockbuster of a tale..to equal Dune, Gloriana or Malacia Tapestry. Its multilayered plot..SF, not witchworld fantasy) would be mainstream..if mainstream readers had more imagination. A future Award winner!

A MICROPROCESSOR PRIMER

E.A.Parr BSc. C.Eng MIEE
Babani £1.75

In logical progression, this slim volume outlines computer operation by building up the imaginary Digital Integrated Microprocessor (DIM.1.) covering input, storage, processing and output techniques..plus program building and subroutines. There's a look at a real machine (the Z-80), some general advice and finally, two appendices (1) on binary numbers, (2) and extremely useful glossary. The author avoids the well worn side tracks of 'history', electronic gates and Boolean algebra and stick to the aim of how to operate a microcomputer. It isn't easy reading, but I fancy it will be much sought after as an excellent introduction to its subject. (Any relation to the Parr who wrote an excellent book on oscilloscopes (with Lewer I think) some 30 years ago ???)

BLACK HOLES AND WARPED SPACETIME

W.J.Kaufman III
Bantam £1.50

If one picture is worth a thousand words, the illustrations (plus 16 colour plates) alone, make this book the equivalent of Encyclopedia Britannica..there are scores of 'em. As for the text, it uses every day language, clear explanation and excellent diagrams to make its points abundantly clear. Stellar origins, star sequence, Solar Phoenix, White Dwarfs, Pulsars, three kinds of Black Holes in easy stages. Then possible Interstellar Travel via the most common type of black hole, time travel, antigravity, galaxies, quasars, Seyferts, the Big Bang and much, much more. This one replaces Asimov's superlative 'Collapsing Universe' as my most treasured book..if you have any interest in our universe.. GET this one...and authors, take note...stacks of plot and simple background detail here for the asking. What more can I say? It's great!

CAUTIONARY TALES

Chelsea Quinn Yarbro
Sidgwick & Jackson
£6.50

13 tales of 'speculative fiction' with little or no hardcore looming on the horizon. As is usual in such tales, you are generally left to decide for yourself how things work out in the end. In this assembly you meet sadistic alien envoys, a teeny-bopper ghoul, a machine that becomes a playwright, post A-war mutants (by 2000 AD!!) demon conjuring, a swamp monster, corruption on a star ship, discovery of an alien teaching-machine and many other goodies. I say 'goodies', because although 'Spec-F' is not my bag, Ms. Yarbro's treatment of it most definitely is. She avoids the ten-words-in-place-of-one syndrome and tells a highly workmanlike and equally entertaining story. One of the better collections and well suited to newcomer or old-stager. For good measure, each tale has an explanatory footnote.

IN THE CENTRE OF IMMEASURABLES

Bernard Lovell
Granada 'Paladin' £1.50

A tour of cosmology old and new..from earliest ideas to current theories of Stellar and Solar System origins. There are details of planetary probes, interstellar communication, the origins of life, expanding universe and Big Bang...I'm still waiting to find out why the original singularity, with all the mass of the Universe, didn't become..or stay, a Black Hole (which get no mention here). The main theme is the linking of discovery with the philosophy of origins reasons and ethics...with a fresh look at the concepts involved.



AND NOW FOR A BATCH OF 'GOLDEN OLDIES'

NERVES

Lester Del Rey
Ballantine 85p

Originally in ASF for 1942 and re-written to update and expand it into a full novel. An atomic power plant is full of hazards and in this tense tale we follow events when a blow-out starts a fatal reaction leading to an explosion large enough to destroy half the USA. Possibly re-issued to make hay from the 'Three Mile Island accident..but still a great yarn

TOO MANY MAGICIANS

Randall Garrett
Orbit \$1.50

This one from Analog in the sixties, and bearing a cover nude having little to do with the story. Set in a parallel time track where Britain is still ruled by the Plantagenets and where magic works. Sorcerer Sean O'Lachlain is called in to solve a 'locked room' mystery. Really a historical fantasy, but if you like kings, lords, knights, courtly speech and gestures together with plenty of sympathetic magic, then this one will be to your taste.

WILD TALENT

Wilson Tucker
Coronet 85p

Stemming from the mid fifties, this is one of the earliest and best psi tales. Paul Breen, a budding telepath attracts the attention of the Government..but while his aid is of great value..the high-ups don't like having their secrets read. The tale reads as well as ever, and added interest is gained by its 'Tuckerisation'...fan names used for characters...there's Slater, Bixby, Conklin and Palmer...see how many others you can spot while you enjoy this highly readable revival.

THE LONG LOUD SILENCE

Wilson Tucker
Coronet 85p

Cpl. Russell Gary awakens from a binge to find the Eastern side of America bombed and plague-strewn. American troops have dynamited bridges and shoot anyone trying to escape the ravaged area. So Gary, plague-immune forages far and wide among looters and killers as he plans how to get back to safety. Less savage and sadistic than more recent tales, but still an excellent yarn...no doubt about it...Snoooooth!

THE BLACK CLOUD

Fred Hoyle
Penguin 95p

A young American astronomer observes a strange cloud far out in space, but approaching the Solar System. As it draws nearer, it proves to be intelligent..so (naturally) missiles are fired at it.... One of Hoyle's earliest (1957) and best SF sallies which was a Stateside SF Book Club selection in '57.

JOURNEY TO THE CENTRE OF THE EARTH

Jule Verne
Penguin 95p

Written in 1864, the story tells of a Runic manuscript which is translated by young and irresolute Axel. Along with Professor Lidenbrock, he and a small band of explorers travel to Iceland and descend into the crater of an extinct volcano. Here they get lost, and have various adventures before finally surfacing in Sicily. Axel, now a man, can claim his sweetheart Grauben. To get the best from this one, read it slowly, savour each incident and you'll not be disappointed.

TAU ZERO

Paul Anderson
Coronet 95p

A Galaxy serial in 1967. The starship Leonora Christine sets out on a 32 light year trip bearing a crew of fifty. Minor frictions occur as the velocity rises. Then the ship hits a protostar, the deceleration Bussard ram jet is disabled and the ship is off on a rampage through the universe. Credible characters and a good basic plot make this one of the most highly readable FTL stories around. If you missed it first time out...give yourself a treat.

JEM

Frederik Pohl
Granada £1.25

When the extra-solar planet, JEM is discovered, Earth's main power blocks (Fats, Peeps and Greasies) send missions to exploit it and its three intelligent races.. burrowers, crawlers and balloonists. Events at home escalate in a tit-for-tat game and likewise on Jem with disastrous results for the would-be Utopia. Plenty of sex, but otherwise, rather downbeat as each individual and group gradually changes attitude and aim. With this qualification, it's a highly readable yarn despite some rather unlikely characters

HOW THE GODS WOVE IN KYRANNON

Ardath Mayhar,
Sidgwick & Jackson £5.95

The peoples of the hills and forest are good, proud and gentle..unless attacked. Cruel soldiers come from the cities and in an episodic series of events (mainly seen from a feminist angle) groups and individuals (with a bit of psi power and aid from the 'gods') put 'em to rout. A rather precious style and the rather soggy characters make this a rather over-written fairy tale,...rather!

EARTH MAGIC

Alexei & Cory
Panshin
Methuen Magnum
£1.40

Young Haldane, proud son of barbarian Lord Morca is to wed by parental arrangement. Treachery intervenes and Haldane flees with the magician Oliver. A spell is cast by Oliver to disguise the pair but its effect is longer lasting than intended so that Haldane and Oliver have to survive as plain peasants. Different from the usual sex, slaughter and suchlike tales, with more introspective (and credible) characters.

CATFACE

Clifford D Simak
Methuen 'Magnum'
£1.25

Originally titled 'Mastodonia', wherein small farmer Asa Steele has a strange hollow on his land, and in the hills, roams a being capable of opening gates in time. Contact is established and roads into time opened so that hunting safaris may travel into the past...but as might be expected, complications arise. Plenty of the idyllic pastoral life and folksy nature, but overall, a steady paced and highly readable bit of Simak, with no 'baddies' but simply the pressures of government, society and the need to conform. A welcome change from the average time tale.

LIFE AFTER DEATH

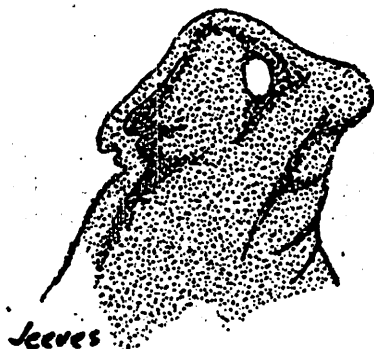
Neville Randall
Corgi £1.00

A series of 'communications' transcribed from tapes made by the medium George Woods. Famous or otherwise, the 'speakers' all sound like a middle-class H.G.Wells character generalising on a country holiday. 'Sort of', 'Kind of', 'What you might call' occur frequently..and 'Oscar Wilde' knew without any explanation, what 'tapes' were. Little or no corroborative evidence is offered, but when did believers need that. If this sort of thing interests you...try it.

HEMOWORLD

Harry Harrison
Granada £1.25

Engineer Jan Kulozik is one of the elite in an England where the holiday he encounters a Resistance movement, joins it and his activities arouse the interest of the Secret Police. Part 1. of 'To The Stars' trilogy..entertaining, but of no great depth with rather shallow characters. Doubtless future parts will liven up as Harry gets into his normal stride.



Leaves

****and now for three SMASH HTFS from Sidgwick & Jackson :-

GOLEM¹⁰⁰

In a dirty, decadent future New York, an octet of rich women tries to conjure up the devil. Instead, their ids create the demon GOLEM¹⁰⁰ which starts a series of unspeakable crimes. Hunting it are the super-sensed Gretchen, the perfume chemist Sima (currently working on Dil d'Eau) and Police Subadar Ind'dni, plenty of sex, some 'in jokes' (read that perfume again) and even more in the way of word inagery than 'Demolished Man'. The characters come alive and sections of the text are given added visual inagery by Jack Gaughan's artwork. A block buster of a novel, (near 400pp) and not to be started late at night if you want to get any sleep. If you can't afford it now, make a note of it on your 'want list'...Price£6.95. S & J.

THE SCIENCE FICTIONAL SOLAR SYSTEM

Ed by.. Asimov, Greenberg & Waugh
Sidgwick & Jackson £6.95

Another hefty collection bulging with 13 items, each linked with a body or part of the Solar System. Among the goodies are Nourse's 'Brightside Crossing', Blish's

incomparable 'Bridge' and Carr's (Hop Friend. The author line-up is star-studded (Clarke, Anderson, Sheckley, Leiber etc). Then to ensure that fictional planets don't give you the wrong idea of reality, Isaac Asimov has added a brief essay to each tale, detailing the currently know facts..and theories of each tale's locale. Want more? There's also a potted biography of each author tucked away at the rear. Apart from plain ordinary reading pleasure, this one is ideal for school libraries and gift seasons at all levels.

WILD SEED

Octavia E Butler
Sidgwick & Jackson
£6.95

3,700 year old Doro maintains his immortality by taking any body he wishes. Over the years, he has established seed villages to propagate wild talents..and to feed another vital need of his condition. Then he discovers the shape-changing immortal Anyanwu and enmeshes her in his plans. However, his killings and in-breeding experiments set her against him and his callpus farming her body to others for his own ends earns him her hatred. The canvas is Africa of the slave era, then America prior to the Civil War...but the background could be anywhere, anywhen, what holds one throughout is the development of Anyanwu and her abilities and the implacable, yet mellowing Doro's motives and actions. Personally, if I could only have one of these three (and a hard choice it would be), I fancy I'd plump for 'Wild Seed'. Ms Butler goes from strength to strength and here she never puts a foot (letter ?) wrong.

ERGITORIAL ADVERT

Assorted items still available..first come, first served.

ERG's 21st Anniversary Issue.. No. 70 ...50p

ERG's 21st Anniversary Badges...with colour repro of Annish cover.... 30p

Back issues of ERG No.71...35p No.69...35p No. 68...35p

No.66...20th Annish...35p No. 34...40p

ERG.30...45p ERG.23...45p ERG.12...40p

ERG.5...50p ERG 3...45p ERG. 32...40p ERG.67...35p

DUPLICATING NOTES..a few copies with two or three of the art pages missing going at £1.00

If it is more convenient...amounts up to £3 may be paid in 10p or other low value stamps. Send no cash..just your order. I'll mail what you want if I still have it, and bill you then.

THE PENGUIN SCIENCE FICTION OMNIBUS * * * Best Buy!

Edited by Brian Aldiss This mammoth, 36 story
Penguin £1.95 collection contains the three
earlier Aldiss books..Penguin SF, More
Penguin SF and Yet More Penguin SF. If you have
don't buy the Omnibus...otherwise, DON'T MISS IT. The
contents page reads like a Who's Who of SF.. E.F.Russ
Simak, Schmitz, Budrys, Ballard, Clarke, Porges, Blish,
Van Vogt etc and etc. I haven't seen a line-up to
equal it since the first superlative Gollancz SFWA
volume. If I were to do a 'Which' report on SF, this
would indubitably be 'Best Buy' by a big margin.



Seeves

HUNTER OF WORLDS

C.J. Cherryh When a quarrel arises between two of
the Galaxy-ruling clans, Chimele, head of the Ashonome must
Futura 'Orbit' find the missing Tejef. To do so, she mind-links spaceman
£1.50 Aiela to the beautiful Isande and the human Daniel with a
result, not entirely expected. An excellent, people and character-
oriented tale with greater pace than 'Dune', but made more difficult by the
excessive use of contrived words (read the glossary first). Master that and
the resultant pleasure is well worth the effort.

THE STARSEED MISSION

T.S.J. Gibbard The four man crew of a starship come out of deep sleep
Hale £5.25 to find the long-term android crew vanished and the only
way they can reach the Comdeck is through the generation
settlement of Happy Valley and the strange conditions
they find there. Events escalate to include black hole travel, three types
of aliens, a sentient planet, Wyatt Earp and Doc Holliday! Sounds a mishmash,
but it is all logically woven together with an unexpected twist in the tail..
to say more would give it away. Only the Commander Pettit has any character
depth, but this is still a highly readable yarn even if not 'great' SF.

YOU MUST REMEMBER US

Leonard Daventry *** The starship New World leaves Earth with a crew of
Hale £5.25 50 or so, then after an encounter with an alien derelict
a strange cancer begins to kill off the crew. The captain
proposes a bizarre but workable solution and the drastic-
ally altered survivors make landfall to build a new world. Characters are
slight, the altering viewpoint makes empathy difficult, and the loose ends and
strange behaviour of their seemingly uncontrolled ship all reduce the story to
what is a pleasant read but not a memorable one

THE WORLD OF ARTEMIS

Neville Kea Small-time crook and ardent seducer, Nigel Blair is
Hale £4.95 shanghaied to the planet Artemis as a paid slave worker (the
exact status is unclear) for the female rulers. However,
since the women are tall, strong and punish would-be seducers
by castration, he has to tread rather carefully.. and then there is the local
equivalent of '3 die Hawkins key' to worry about. Nothing serious here, but
just a lightweight fun story for you to enjoy without worrying about any
mis-use of science, deep characterisation or motivational situations.

100 SCIENCE FICTION SHORT SHORT STORIES

Ed. Isaac Asimov, M.H.Greenberg & J.D.Olander The short story must set its
***PAN SF £1.75 scene, its action and its
punch line with a minimum of padding. The ultra-short
must achieve this with even fewer words..AND coax a harried editor to squeeze
it in among its longer competitors. Here are 100 such refined jewels of the
writer's craft..each of high quality and excellence and never a dull moment.
One a night will last you over three months..or putting it another way, each
tale only costs 1.75p. With such quality, how can you lose ?



AMES RESEARCH CENTER

MOUNTAIN VIEW, CALIFORNIA

OFFICIAL PHOTOGRAPH

JUPITER'S CLOUDS

This view of Jupiter's North Temperate Region shows never-before-seen aspects of the planet's cloud top. Taken by the Pioneer 10 spacecraft as it flew past the giant planet on December 3, 1973, details of the picture have been improved by computer processing at the Optical Sciences Center, University of Arizona.

This view is from 992,000 km (616,000 miles) away. Planetary rotation (at 22,000 mph at the equator) is from left to right. The picture is among the best closeups made by Pioneer 10, and shows far more detail than can be seen from Earth. Among the most interesting features is the whirl of cloud motion seen on the right. Its edges and boundaries are extremely sharp. Apparently, there is on Jupiter an appreciable amount of latitudinal (north-south) motion in addition to the predominant longitudinal (east-west) light and dark bands. These swirling cloud features are thousands of miles across, many the size of continents on Earth. Jupiter's planet-circling bands now are believed similar to "highs and lows" found in Earth weather, but are stretched completely around the planet.

Jupiter's atmosphere is largely hydrogen. The planet is believed to have a small, rocky core which has a temperature of 54,000°F (six times the temperature on the surface of the Sun)—and going from the center outward to the surface, temperatures are believed to decrease steadily to something like 10°F above zero, at a point somewhat below the cloud tops where pressure is one Earth atmosphere.

Jupiter radiates 2.3 times as much heat as it receives from the Sun. The best explanation for Jupiter's tremendous internal temperature is that it is left over from heat of formation of the solar system.

The Pioneer Project is managed by NASA's Ames Research Center, Mountain View, Calif. The Pioneer spacecraft was built by TRW Systems, Redondo Beach, Calif.

PIONEER-JUPITER MISSIONS—Man's first reconnaissance of Jupiter began with the launch of two spacecraft, Pioneers 10 and 11, in March 1972 and April 1973.

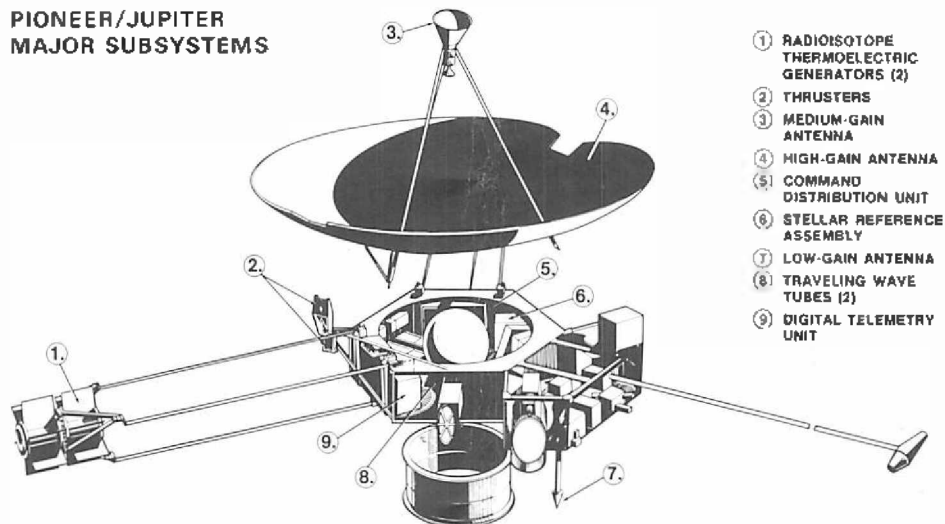
These two Pioneers are the first to go beyond the orbit of Mars, to pass through the Asteroid Belt, to reach Jupiter, and to use Jupiter's gravity to escape the solar system or to go to Saturn. The trip covered more than a half-billion miles.

Pioneer 10 came within 81,000 miles of Jupiter's banded cloud tops. Pioneer 11 comes to within 26,000 miles of the cloud tops in December 1974.

Pioneer 10 will cross the orbit of Saturn in 1976, of Uranus in 1979, and will leave the solar system headed for the red star Aldabaran in 1987. Pioneer 11 is targeted to reach Saturn in 1979 after passing around Jupiter.

SPACECRAFT—Pioneers 10 and 11 are identical spacecraft, weighing about 570 pounds apiece, including 65 pounds of scientific instruments. Each can perform at least 13 scientific experiments, and make hundreds of measurements. The Pioneers can communicate to Earth from as far as two billion miles.

**PIONEER/JUPITER
MAJOR SUBSYSTEMS**



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CLOSE-UP VIEW OF JUPITER'S CLOUDS BY PIONEER 10 (NORTHERN HEMISPHERE)

