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30 KING KONG

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54 SPECTRAVIEW®

Are visiting new machines full of random guesses. But can it solve decent puzzles?

61 NINETY-NINE GAMES

Underwater Camera of the Month for the Specimen. Hit for the COMMONORE 64, ZSL, ATARI and BBC. Plus all the latest action from the ORIC, VIC 20, ELECTRON and LYNS. Our experts finish the auction and give their verdicts.



113. GAMES PROGRAMMING

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13th FLOOR LISTINGS

SPECTRUM Cliver is this month's sexy mystery collector.
DRAGON Blazer, an all-action space program.
CRIM 66 Four intergalactic heroes with Halloran.
ROD Madman, Phil, a man who is finally, becoming



90 MANIF MATTHEWS

It's more the barefoot teenage models who stole the show at the 1990s Music Moves.

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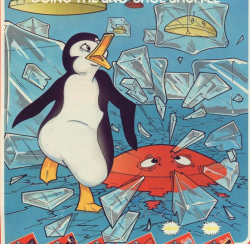
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SLINKY

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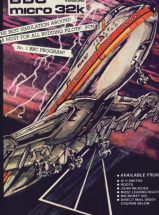
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Seventy exhibitions drew over 20,000 visitors to the December BBC Micro User show at the Westminster Exhibition Hall.

Some of the major software houses were notable by their absence, preferring to let their dealers do the selling. Acornsoft was sadly missed, and Program-Prover was disappointing, only, though software from both companies was available at other stalls.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Dumbarton, which was a star of the show along with Software Invasion's new HD space-saver, *Vector*.

The success of the show has prompted organisers Database Publications to hold a further five shows in 1988, one in Manchester and four in London.

The next exhibition runs from 29 March to 1 April, 1984 at the Westminster venue. Further details from Dushane on 061-4364783.



ELAN GAMES ON THE WAY

Fast pictures

If you get fed up waiting for the graphics to draw during your favourite adventure game, you may be interested in a new release for the Spectrum from Phoenix Associates.

Their game *Codatta* features special machine code routines that drive the plot in under a quarter of a second.

Phlips Associates are also bringing out four new arcade games, including a Bang derivative called Killer Knight (see knight.killer.com) and other innovations. The programs cost \$3.95.

The Elan Enterprise, due to be launched at the end of April, looks set to become the best new names machine of 1994.

With the Sinclair Q1, promising to corner the low-cost business/applications market, Plan have been quick to turn their attention to the home games player, and close links with Intelligent Software have given the machine a firm footing in the software industry.

Keith Elliott of Intelligent has been curbsiding program houses on Elm's behalf, and details of the operating system are already in the hands of game programmers across the country. Delivery of pre-production models is under way.

According to Elliot, software houses have given the ERM specification an enthusiastic welcome. He is also understandably pleased that Sinclair have moved up market: "It gives us a very close run," he adds.

Software to be released at the same time as the machine includes three adaptors, and a program to convert listings in RISC and Spectrum Basic to run on the machine with little or no modification.

Machine code programs for these machines may also be converted using a similar program being considered for release at the end of this year.

Alan Mason, director of Software Projects (distributors of Music Miner) was quick to endorse the machine's potential. "I think it's going to be a wonderful machine, and obviously there's one program that must go on it. . . . Other companies looking at the Glue include Imagine, Micro-Gem, and Ultimate

Flan claims that the machine is still on schedule for its April launch. Supplies will initially be limited, and the company will be aiming to build up stocks for next Christmas in addition to meeting current demand.

For an 8-bit computer the ERM offers an impressive specification perfectly tailored to meet the games player's requirements.

The basic machine comes with 64K RAM, built-in joystick, stereophonic sound, and excellent graphics capabilities. A 128K model is scheduled for release in July.



US game prices cut

Prices of top-selling American programs for the Commodore 64 and Atari computers have been slashed in a bold marketing move which sends a clear message to British buyers.

Xanax, the anxiolytic favoured by Datasoft which has been at the top of the US charts for the past year, has come down in price from a hefty \$29.99 to \$14.99 making it great value for the Atari computers. For the Commodore 64, Prozac and C/D-50's Milt, also from Datasoft, are available at the same price.

How have Centropsoft, the British distributors, managed it? Geoff Brown explained from the company's Birmingham offices that it had been done by persuading the American manufacturers to take a cut in their profit margin in order to increase sales. 'The products have been re-packaged to make retailing easier and to cut costs.'

Also in the shops from Centroseff are three programs by US company Coconit: Caverns of Knappe and Slinky for the Aard, and Perfidious Forest for the Commodore 64, all three retailing at \$9.95.

Does this mean that all imported software will now tumble in price? Geoff Brown thinks it does. 'I'm sure everyone will follow suit,' he says.

Sinclair QL:

Business only?



Games software houses are fighting shy of the new Sinclair QL, despite its impressive specification.

A spokesman for Ultimate, producers of *Atic Atac* and *Jet Pac*, echoed the feelings of other companies by pointing out that the average family will have difficulty in meeting the £400 price-tag. Camorra has also been expressed about the reliability of the micro-drive units.

The only software house which said it was definitely producing games for the QL was Pison, which put together the utility packages supplied with the machine.

Even so, because of limited time and resources, it is unlikely that any Pison games will become available before the end of the year.

The QL lacks the comprehensive sound facilities of machines like the Oric and Commodore 64, offering the user nothing more than an enhanced user command. With the increasing role played by sound in games software this may be a disincentive to some programmers.

The QL does however offer excellent opportunities to adventure programmers. With 512 x 256 graphics resolution, multi-tasking and multi-window capabilities, and two built-in microdrives, the machine could not only display different locations in different parts of the screen simultaneously, but also give you a graphic and text description of what was happening in each place.

The 128K of RAM can be increased simply by plugging in the half-megabyte expansion cartridge, thereby providing enough memory for adventures of truly mind-boggling proportions.

The processor used by the QL offers a ray of hope to arcade addicts, since it is the same processor as that used by some software houses to develop games for 8-bit machines like the Spectrum and the Commodore 64. Imagine Software in particular used the 68000 to bring us games like *Atic Atac* and *Zaxxon* for the Spectrum, and they may well be tempted to use the expertise that they have gained on the 68000 to put out games for the QL.

Pirate software

Elephant's new release *Kamikaze Pirate* is a new departure for the company.

Rather than their usual puzzle software this program is a mixture of shoot-'em-up and strategy. As captain of *Red Head 2* you manuever through space-rocking fleet.

The problem is in controlling the potentially massive crew. There is also the little matter of a malfunctioning navigation computer. The game costs £3.95.

BBC Correction

The listing of the program *Galaxies* for the BBC published in the February issue of *Personal Computer Games* was printed with part of line 1050 missing. The line should read:

```
move: move(0,0)=0
move: move(0,0)=0
move: move(0,0)=0
```

We're really sorry about this error. However, it won't have affected people who loaded the same program off the computer disk.



£1,500 MICRO 80 PRIZE WINNER

A freelance micro programmer from Swindon has become the first 'champion computer Go player of the world'.

That title and a cheque for £1,000 were bestowed on 29-year-old Bradwell Preyble when his program to play the oriental board game beat seven others in a tournament sponsored by Acornsoft in London last weekend.

No such tournament has been held anywhere in the world before, even in Japan where the game is played by over 10 million people.

In Japan Preyble's Go strength would put him among the nobodies, but here his programming expertise paid off, confirming what has been found in computer chess: programming ability counts more than games ability.

He wrote his program entirely in Basic on an Oric before converting it to a BBC Micro as required for the tournament. On the BBC machine he was also able to make advantage of recursion and the very fast Basic to produce a speedy program that surprised human Go players with the quality of its play.

But it will be a long time before it can seriously challenge humans who have played more than a handful of games, and in any case Acornsoft, who have decided to move more seriously but cautiously into the intelligent games market, will not be publishing the program for at least a year.

When, and if, it does appear it will include a demonstration and instruction module for new players.

STOP PRESS

Amazing games exhibition!

A terrific games exhibition is being sponsored by Personal Computer Games for the Easter weekend.

It's to be held at the Solihull Conference Centre on Friday, Saturday and Sunday, April 20-22. Dozens of program companies will be demonstrating their latest games, and there'll be stacks of prizes and unbeatable offers.

The place will also be packed with celebrities because on the Saturday the Radio One *Music Marathon* is being broadcast live from the exhibition hall. It promises to be an unforgettable occasion. Full details next issue.

Bug-Byte's new Minor

Bug-Byte hope to have a replacement for *Major Minor* in the shops by early spring. The program, to be called *Minor Minor*, will be a multi-level game for the Commodore 64.

Nasty things will happen to Cabbage Patch Dolls and many well-known figures in the computer industry will be lampooned. The program is written by Wayne Quinn, who is not a Hollywood comedy star but a 16-year-old Liverpoolian.



Search hot's up for game of 1983

A group of judges is faced this month with the near-impossible task of naming the 1983 game-of-the-year.

The award is one of 10 being sponsored by the Sunday Times and VNU, publishers of Personal Computer Games.

The three games which PCG has nominated for the title are *Power* from Ultimate Play the Game, *Mantic Miner* from Software Projects and *Planetoid* from Acornsoft.

Power was chosen because of Ultimate's famous graphics. We thought that in terms of originality and fun, it just beat the other Ultimate contenders such as *Cookie* and *Jet Pac*. (The latest Ultimate games are ineligible because the competition is limited to titles on sale before November 1, 1983.)

Mantic Miner must or less selected itself as about the most entertaining, action-packed game around last year.

The third choice was less easy. But Acornsoft have come up with a large series of excellent copies of the best arcade games. We decided one should be included, and since *Defender* is everyone's (well almost everyone's) favourite space game, that fell in with the BBC version *Planetoid*.

Other nominations which the judges will consider are the year's innovative adventure games, *Whitehills* and *The Moth*, *At Attack* from Quicksilver, and *Zooom* from Imagine.

One game which we would like to have nominated is the remarkable *Scrabble* simulation from Pison. Unfortunately it's ineligible because a VNU employee was involved in writing it.

The winner of the award will be announced on March 26 at a ceremony in London's Royal Garden Hotel. The winner will be presented with a special Personal Computer Games trophy.

All in all 1983 was a remarkable year for games. We already 1984 is proving to be better...

WHISPERING HORACE

I am becoming increasingly worried by the distressing habit of putting programmers' pictures on cassette sleeves. First we had to look at the anonymous Virgin mob and I find, to my horror, that there is a photo of a wild-eyed bearded fanatic staring at me from the cover of *Stackers*. The caption says this man is called 'John Gibson' but I have my doubts.

No sooner had I recovered from this shock than I was confronted by the same grisly features, in the company of three other humanoid programmers, in a full-page advert for Imagine.

It really is most upsetting. Where is it all going to end? Must we wait until some sensitive young soul is dragged away from his machine, screaming in terror, before software houses realize their responsibilities?

'Software portability' takes on a new meaning with a manual offering from SoftDisc.

Having failed in their efforts to launch the game *Game Clinic* in time for the Christmas market, they're bringing it out now - as *Exotic Dances*...

I hear that a number of gentlemen currently housed at Her Majesty's expense have been making an important contribution to the games software industry. At Wasswood Scrubs they wrap, catalogue, and park the cassettes for Rabbit Software.

This company appears to have a strong hold over the unfortunate inmates, some of whom have backgrounds of extreme violence. 'They'll do anything we want them to,' said Rabbit's Terry Grant menacingly.

Other software houses should immediately take out life insurance.

What on EARTH is going on at Imagine? Whispers have reached me that so-called star programmer Eugene Evans (one-time claimed income £48,000 a year) left the company in a huff to start his own software house - and then limped back two weeks later to re-join, and complete his current game *Psychopets*.

'Well,' I asked him, 'did you leave?'

'I may have done,' he said. 'There again, I may just have gone on holiday.'

John Phillips of Bag-Byte has been screaming in fury at me following our suggestion last month that former Bag-Byte colleague Alan Bates had been promoted to marketing manager before leaving to set up his own software house. You see, John himself is marketing manager, and as for Alan: He was promoted from jilly bag packer to slightly older jilly bag packer. That's all.

I of course hastened to pass on to Alan this devastating statement. Two never packed a jilly bag in my life,' he told me.

'But I'll say this, John Phillips came up here and asked for a job I wouldn't give him one. We've risen above all his childish hysterics.' Wonderful to see such a spirit of friendship and cooperation abounding.

I hear from Imagine-based software house Durell what agonies they went through in trying to choose their name. After much soul-searching they narrowed the field down to two. One of them, Durell, was finally agreed on - it's founder Robert White's middle name, nothing to do with Superman's dad. The other name, only just rejected, was 'Wobblenut'.



Competition result

The winner of the competition in our December January issue is 14-year-old Graham Simmons of Arris-sham, Bucks.

He picks up a complete £1,000 Colour Centre system including portable colour TV, cassette recorder and desk drive.

We'll print winners to the competition class in next month's issue.

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At 18, star-programmer Matthew Smith says he's over the hill.

Peter Connor, 27, takes notes and worries about his pension.

MATTHEW SMITH

THE MINER DESIGNER

When I arrived at Liverpool's Lime Street Station one grey December afternoon in 1981—the first thing I noticed about Matthew Smith was that he wasn't wearing any socks. Hadn't he earned anything from writing the top-selling Spectrum game *Manic Miner*? Couldn't he afford socks?

As I later found out, my worries were unfounded; he certainly had made some money. But Matthew is not the whimsical breed of programmer, the adolescent lad who lingers in his park bike for a Permit on his 17th birthday.

Instead, he is an unassuming, but confident, teenager who is ready for even more success as *Jet Set Willy*, the next instalment in the *Manic Miner* saga, hits the nation's screens.

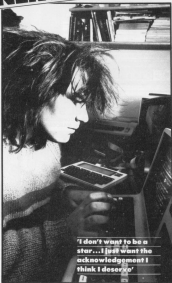
At the office of Software Projects, the new company in which Matthew is a major shareholder, he told me how he'd first become interested in computing: 'I'd been keen on electronics, building transistor radios and so on, and five years ago my parents gave me a Tandy for Christmas. It only had 4K of memory and unexpanded Basic, but it got me hooked.'

Like many others involved in Liverpool computing, Matthew joined the Tandy users' group based in the local dealer's shop. 'We used to hang around after closing,' says Matthew. 'Fortunately the manager was an enthusiast as well.'

He pursued his interest at home too, and at the age of 14 wrote his first commercial program, a version of *Galaxians* called *Orbit Power Line*. 'It took me weeks to write it. I think it sold 13 copies and I made about £70 profit.'

'It was just an average game,' he added modestly.

Average or not, the game showed him that there was a living to be made in programming. Through his contacts in the Tandy shop he began to write business and accounting programs for companies in the Liverpool area. It was this freelance work which saw him through the period after leaving school.



'I don't want to be a star... I just want the acknowledgement I think I deserve'



in October 1992.

'I didn't like school,' says Matthew, 'and it didn't like me.' Still, he managed to pick up nine or 10 'C' levels.

It was only in April of last year that Matthew first got the Spectrum which has brought him fame and fortune. By this time he'd become associated with flag-flying, and it was for them that he wrote *Arise*, his first successful game program. In this perilous journey to the Shades of Greek mythology an experienced eye might be able to detect the germ of *Manic Miner*.

Before starting on the Herculean task of creating *Manic Miner* Matthew went on an 'inspirational skiing trip', which seems odd since he describes himself as 'naturally lazy'. It must have done the trick, though, because he was able to come back and spend eight solid weeks on the new program.

He followed a daunting routine: getting up in the evening, working until lunchtime, sleeping for a few hours and then going back to the computer. It doesn't sound like a leisurely one.

Matthew's approach to programming is straightforward: 'When I got the Spectrum I worked out the limitations of the machine and then decided to write a program to go to the limits.'



He actually wrote *Manic Miner* on a Model 4 Tandy with 5 Megabyte hard disk and then transcribed it on to the Spectrum. 'It's more efficient like that,' says Matthew, 'because the Tandy and the Spectrum both have the Z80 processor, and there's no waiting for loading and saving.'

I asked him if he had had any artistic help with *Manic Miner*'s impressive graphics. 'No,' he replied. 'I drew them out myself on graph paper. Art was one



**'I'm not interested in
flash cars, the money
has just made it easier
to be lazy.'**

of my better subjects at school.'

Manic Miner, though, was not originally Matthew's idea. It came first of all from Alan Minter, his partner in half-wares Projects, who suggested the idea of a figure tunnelling down. Matthew turned this upside down and the result was the game all Spectrum owners know and love.

Their first thought for a name was *Miner 49* or *but, like many great inventions, someone else got there just before*

them. Whatever the name, Matthew was confident of success. 'I was pretty sure it was a winner as soon as I'd finished it.'

He took a two month holiday after *Manic Miner*'s completion in which, he says, 'I just went to bed at nights.' But there has been little rest for him since his return to Liverpool. In September a follow-up to *Manic Miner* was 'discovered' over meals in various restaurants. And so, over the tablecloths, let *Jet Set Willy* wash on.

Matthew has found things rather difficult with Willy. 'The program you really have to enjoy sitting at a computer all night,' he said, 'but I'm getting too old to manage the hard regime.'

However, despite the weight of his 18 years, Matthew is pleased with what he's achieved in *Jet Set Willy*. 'I think I've got about three times as much into the program as in *Manic Miner*'. He describes it as being in the style of an 'arcade adventure' with graphics developed on his own special software.

Again he's confident of success: it'll reach number one, he predicts, but he doesn't think it will stay there as long as *Manic Miner* because 'there's too much good competition around nowadays.'

Jet Set Willy is bound to bring Matthew even more publicity, yet the role of ace programmer is one he's unwilling to play. 'I don't particularly want to be a star,' he says. 'I just want the acknowledgement I think I deserve for writing good programs.'

Part of this recognition is likely to be a lot more money - to go with the £20,000 or so he has already banked from *Manic Miner*. But there won't be any extravagance: 'I'm not interested in flash cars and that kind of thing,' he says. 'The money has just made it a bit easier to be lazy.'

After another skiing trip, Matthew expects to start thinking about a follow-up to *Jet Set Willy* - perhaps to be called *Willy Meets the Taxman*. He also intends to start programming on the Spectrum and other machines using the M54 operating system, another massive market for minor Willy.

Looking further ahead Matthew's future is uncertain. He is sure, though, that he 'won't always be a games designer. 'Programming games won't keep me going for the rest of my life,' he says.

So what will? He hopes to take a closer interest in the business side of Software Projects and doesn't rule out the possibility of studying Computer Science 'when I'm too old to program'. That might not be too far away since he says 'I'm a bit over the hill already.'

And what about those sales? Obviously Matthew Smith has enough pocket money to buy a few thousand pairs.

'I only wear them occasionally,' he says, 'when it's very, very cold.' Sometimes, writing *Manic Miner* seems to have warmed the parts that other computer games don't reach. ■

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(Please use block capitals)

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My title is _____

Q. _____

A. _____

I would like to win a set of games for the Spectrum/Oric/Commodore 64/BBC/Electron/Dragon (Circle one only).

Competition

ONTEST



● WRITING RIDDLES IS EASY

Q. What did Gandalf say when Bilbo kept asking him how to get through a dark forest on one leg?
 A. Haggid hobbit.

Q. What should you do if your brother offers you £10 to play with the leavy program you just received?
 A. Take the money and go.

Q. What happened when Florence got eaten by the spiders?
 A. His wife became a black widow.

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 rules, but look out for the
 ing ways of attack/ons
 and he drops rocks on your
 a descends through the
 from your spaceship
 of windows, ghosts and
 he drops rocks on your head
 pit fire beams



The first questions are not part of the competition. But if you answer them it will help us in planning future issues of the magazine. The thing I like best about Personal Computer Games is _____

The thing I like least about Personal Computer Games is _____



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A machine code game for one or two players, defending your supplies from computer controlled tanks. This stretches your reflexes to the limit as you try to shoot back until they have as much as you when they do, look out!! (Joysticks required)

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£1000 RIDDLE CONTEST

Q What would you call a competition in which 70 (seventy!) people win sets of games for their micros simply by writing a funny riddle?

A. Start up and pass on the entry form!
Yes folks it's true. We're giving away a huge £1,000 worth of fantastic games. They're from Softlok, a company who produce exciting programs for all the main home computers.

Every winner will receive a set of two Softlok games for his micro - BBC Electron, Spectrum, Commodore 64, Vic 20 or Dragon. There are a total of 70 prizes.

So how do you enter? Easy as laughing. Just dream up a riddle which has something to do with home computers or computer games.

It should take the form of a single question and answer, and these together should amount to 50 words or less.

When you've thought of your riddle, write it neatly on the entry form below. Complete the rest of the form, making sure you've specified which machine you want the computer games for. Then send it to us by the end of March.

The 70 people who write the riddles we think are the funniest will win the prize - and their riddles will be printed in the magazine for us all to laugh at.

To get you in the mood just look at the three riddles on this page. They were written by the editor which can only mean it's not difficult. So... get cracking.

● WRITING RIDDLES IS EASY

Q What did Gandalf say when Bilbo kept asking him how to get through a dark forest on one leg?
A. Huppt huppt.

Q What should you do if your brother offers you £10 to play with the loop program you just learned?
A. Take the money and run.

Q What happened when Horace got eaten by the spiders?
A. His wife became a black widow.

● THE PRIZES

Every winner will get two tapes depending on which machine he has selected.

● **SPECTRUM** Microbot (BBC only). Repeat robot beams, but look out for the insects.

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● **ORIC 1** Ice Giant! Battle the huge creatures from your spaceport.

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Smile. Battle those aliens with your rapid-fire lasers.

● **BBC ELECTRON** Fire Storms of Anadon. Can you survive in this space for fabulous wealth?

Four Machine. Gamble away without losing any money.

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Ensign House, 62 Oxford Street, London W1A 2HG

My riddle is _____

Q _____

A _____

I would like to win a set of games for the Spectrum / Oric / Commodore 64 / BBC Electron / Dragon. (Circle one only)

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MICRO



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Stuffing isn't it? All you did was get a computer to have some fun on, and people expect you to speak an entirely different language. We'll try to help out.

Computer games come in many different types, but these can be divided into a few broad categories.

The most common are **ARCADE** games. These aren't just games that you see in the arcades, but any game in which you use the computer keyboard (or a joystick) to control directly the movement of characters or objects on the screen. Arcade games themselves fall into several different categories (see below).

Then there are **ADVENTURE** games. The main difference is that to get things to happen you have to actually type in instructions rather than just press a key to go left or right. This means that adventures proceed at a slower pace. Their challenge is to do with brain-power, not finger-power, and a good one can keep you occupied for months.

In recent months, the dividing line between adventure and arcade games has been blurred, with pictures and more moving pictures being introduced to adventures, and arcade games being written as adventure themes.

Then there are **STRATEGY** games. Examples of these include games in which you control the fortunes of a country at war. The program might present the player with maps and statistics from which he will have to make his decisions.

MICRO CLASSICS

• **SCRAMBLE** Pilot your ship over mountains through canyons and around obstacles, avoiding missiles and mines.

• **DEFENDER** Fast-moving space game in which your ship fires bolts with all manner of effect.

• **ASTEROIDS** Destroy asteroids and alienrafts using a highly maneuverable ship.

• **FRODOG** Guide the frog across busy roads and crocodile-infested rivers.

• **GALAXIANS** Development of Invaders, with the descending alien raider and rebound off to the sides.

• **DONKEY KONG** Climb ladders and jump over obstacles as you attempt to rescue the damsel in the ladygarden.

• **PAC-MAN** Eating meat games and the monsters at the gates.

• **MISSILE COMMAND** Protect your cities from the invaders by trying a protective covering of missile fire.

• **SPACE PANIC** Defeat the monsters by bombing them on the floor and knocking them through the different levels.

• **CENTIPEDE** Blast the centipede, which splits up as it changes forms on you.

COMMODORE 64

TITLE	PRICE	SUPPLIER	COMMENT
Super Pipeline	£ 90	Foxton	Isometric pipeline while fighting off deadly bugs
Junior	£ 90	Foxton	Storage and shipping game featuring musical instructions
Mafia	£ 90	Lamson	High speed grid games. Carriage development with unique features
Invaders	£ 90	Lamson	Alien invader game with graphics and games
Attack of the Mutant Cornels	7.90	Lamson	Defender adaptation with a jet fighter engaging deadly cornels
Attack of the Mutant Cornels	8.00	Lamson	Follow up to Attack, with cornels fighting hard and 42 screens
Mafia Mafia	8.00	Autogenic	Good roadblock game
Active Patrol	8.00	Virgin	Good fighter simulation with 2D scrolling graphics
Never Bow	8.00	Lamson	Submarine gardeners survival with three screens in a fast and witty game
International Soccer	9.99	Commodore	Superb soccer simulation on cartridge
Two Kingdom Valley	9.99	Bug By's	Superb animated graphics adventure
The Hobbit	14.95	Mailhouse House	Complex adventure based on Tolkien's book

VIC 20 GAMES

TITLE	MEM	PRICE	SUPPLIER	COMMENT
Invaders	8K	£ 50	Lamson	Alien invader game with guns on a, p keys
Mafia	8K	£ 50	Lamson	High speed grid games. Carriage development with unique features
Omega Race	8K	10.00	Vicsoft	Advanced development featuring bouncing force fields
Star	8K	10.00	Vicsoft	Four screen arcade game with elements of many popular games
Spiders of Mars	8K	10.00	Autogenic	Defender derivative with insect theme
Interdimensional Wars	8K	10.00	Autogenic	The definitive version of Asteroids
Chopoff	8K	10.00	Autogenic	Exciting shooter game, featuring lightning
Sevens	8K	10.00	Autogenic	Variation of the 777 slot machine, with gambling aspects
Outburst	8K	10.00	Autogenic	One of the best 128 color VIC-20 games with multi-screen shooter
Space Pumas	8K	£ 50	Apex	One of the best 128 color VIC-20 games with multi-screen shooter
Brainstorm	8K	£ 50	Lamson	Penetration of Asteroids featured in a grid game
JetSet	8K	£ 50	Ultimate	Use your jet-powered man to evade enemies and avoid aliens
Myriad	8K	£ 50	Vicsoft	Colorful, action-packed shoot-up with 99 levels
Quadrant	8K	£ 50	Apex	Asteroids variation. Defenders, with more jumping and shooting

ERIC GAMES

TITLE	PRICE	SUPPLIER	COMMENT
The Alien	4.95	MSL	Built a seven-space game
Artem	8.50	MSL	Exciting space shoot-em-up
Dragon's Revenge	8.50	MSL	Follow-up to Baron 1 with the Forces of the Spectrum (also Miro's River)
The Hubbit	14.95	AtariHome	Imaginative graphics adventure (Spectrum looks great)
Colossal Adventure	9.99	Level 9	First of a series of hugely complex text adventures
Madhouse Manor	3.50	Arcoxia	Nice version of Castle

DRAGON GAMES

TITLE	PRICE	SUPPLIER	COMMENT
Wizard War	8.50	Solomon	Two player game of battling wizards
Franklin's Tomb	7.50	Solomon	An essential text adventure
The King	8.00	AtariHome	Good version of Denzky King
Flagger	8.00	AtariHome	New version of the arcade shoot
Crozier	9.95	J. B. Morrison (Miro)	Replay the famous in chess
Empire	4.95	Shant	Computer version of the board game that fills in the spaces to get points
Outlaw's Game (AtariHome)	8.00	AtariHome	Adventure with King-style elements
Dragon's Revenge	8.00	AtariHome	Up-Brothers on rectangular pile of books
Black Pearl	7.95	Dragon Books	First of a series of hugely complex text adventures
Colossal Adventure	9.95	Level 9	Imaginative multi-level game with deadly duels
Chickadee	2.95	MSL	

ERC GAMES

TITLE	PRICE	SUPPLIER	COMMENT
Planetfall	10.00	Acornsoft	The definitive version of Defender
AtariHome	10.00	Acornsoft	An excellent version of Gates (also)
Baron	10.00	Acornsoft	Probably the best version of AtariHome for any reason
Snapper	10.00	Acornsoft	A fine version of Pac-Man
Black Pearl	10.00	Acornsoft	A fine version of Defender
Snapper's Companion	10.00	Acornsoft	Space game with real-time ship and fragmenting stars
Flagger	10.00	Acornsoft	Superior version of Flagger
Planetfall	10.00	Acornsoft	The best version of Space Force
Zodiac	7.50	Acornsoft	The follow-up to AtariHome offering great gameplay
Real Runner	8.00	Superior	Can choose mode game
Cyber Attack	9.95	MSL	One of the best (Spectrum type) games available
Colossal Adventure	9.95	Level 9	Adventure series of huge text adventures with 256 locations
Chickadee	7.95	MSL	Compelling multi-level game with deadly duels
30 Munny	4.95	MSL Software	Calculated around Pac-Man derivative
Other Classics	9.95	Flagger House	Excellent version of King

ATARI GAMES

TITLE	PRICE	SUPPLIER	COMMENT
Star Wars	55.00	Atari	A 3D arcade quality game
Defender	35.00	Atari	The best version of Williams of the Atari (also)
Centipede	55.00	Atari	A superb version of Centipede
AtariHome	55.00	Atari	Thinks the best and most recent version of the original
Jason	28.00	Atari	Space-fighter multi-stage game with extended and space bonuses
Denzky King	55.00	Atari	Atari's copy, superbly done
On	35.00	Atari	An intriguing text-based (adventure) game with 256 graphics
Flagger	25.00	AtariHome	Multi-screen arcade-adventure featuring a laser maze and misadventures
Chickadee	25.00	AtariHome	Exciting text-based game, moving locations
Minor (Spectrum)	55.00	Atari	A Denzky King derivative with visual elements
Thames	25.00	Spectrum	Multi-screen arcade-adventure game
Neurotic	35.00	Spectrum	Hyperbolic through several levels of mythic monsters
Pole Position	25.00	Atari	Superb version of the arcade motor racing game
Tennis	25.00	Atari	Excellent simulation, better than Wimbledon

WHERE TO GET YOUR GAMES

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AtariHome, PO Box 88, Basingstoke

Big-Boy, 111, Berry Road, Clonmel, Co. Wick, Ireland

CD-ROM, Unit 2, 1000 Industrial Estate, Basingstoke, Hampshire RG23 8BB

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CLASSIC ★ SCREEN CLASSIC

Our choice from the Good Buy charts this month is a Vic 20 all-action mega-zap

GORF

Gorf is an arcade classic available to Vic owners on a reasonably priced cartridge. The attraction of the game is that you get four shoot-em-ups on the one program, thus giving you a certain variety in your zapping.

The first of the screens is an invader-style challenge, 'Mission 1', the message reads, 'Astro Battles.' Separating your laser base from the invaders is a curved force-field.

You have to blast a few holes through this in order to get a shot off. The danger, of course, is that the aliens can get a shot back at you. The firing too is slightly different from the norm; you cannot fire a constant stream, but must wait until a bullet has hit its target before firing another.

This is, in fact, an advantage rather than a drawback, making the game much more challenging. It's a tricky business dodging the invader's bullets, especially when it gets closer to the first one zooming frantically across the screen. Bonus points can be scored at this stage for hitting the red mother ship which floats across the top of the invaders.

Once you've got rid of these rascals you move on to Mission 2 - Laser Attack. This screen is a Galaxian variant with two groups of aliens, one at each side of the screen.



In each group the lowest bird-like creature fires a very nasty laser bolt which spells death to all who get in its way. As well as avoiding this thing you also have to get out of the paths of the swooping Galaxians.

It's not easy. But in time you'll master these vicious blue and yellow creeps and graduate to Mission 3: Space Warp.

Here the screen displays a number of pulsating colourful lines radiating from the centre of the picture. Tiny ships appear, speed toward you getting larger and then drop their vicious bombs on you.

To succeed here you need nerves of steel and an eye sharp enough to get the ships in their infancy. If you've got what it takes you will eventually reach the fourth and last screen: Flagship.

Once again you are protected by a force field but this time you must try and blast the spaceship cruising overhead. Naturally you are under constant attack from the ship's bombs. The difficult thing here is to score the required direct hit on the flagship's central power supply. It demands an exact sense of timing which I have yet to master.

Given the limitations of the Vic as a games machine, Gorf's graphics are impressive. The sound is also quite good with suitably loud zapping noises. At £10.00 for a cartridge Gorf is very good value indeed.



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● WHY FLIX IS SPECIAL

At first glance, you might think that Flix is simply a copy of the old plastic puzzles in which you slide squares around to put them in the right order.

In fact, Flix is much more sophisticated. For one thing, there's no mixing square. To assemble the pictures, you have to slide entire rows or columns, not individual squares.

This means the puzzle has a similar feel to the famous Rubik's Cube. However, Flix can only be done on a computer - the puzzle has a 'wrap-around' feature which means that when you slide a row, squares which would otherwise be slid off the picture reappear on the other side.

The program is packed with features aimed at making it easy to use.

You can press a key to view six screens the picture in its unscrambled state. You can also a half-finished puzzle on cassette. And there's even an auto-solver facility - great fun to watch, although obviously this isn't available when you're working on the competition puzzle itself!

The puzzle operates on four different levels of difficulty. The competition uses the hardest level, but you can practise on the easier levels. On the simplest level, your picture is divided into just 12 squares.



● 46 PRIZES!!

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This stunning £250 MICROVITEC CUB 1401 VCR CONOUR MONITOR will give you a far clearer picture than is possible on a television. It's the only colour monitor which can be used with a Spectrum, plugging directly into its edge connector.

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● FORTY 3RD PRIZES

Amazing £7.95 PAINTBOX programs from Print 'n' Master. To see the beautiful graphics they can produce (just look at the example on this page).

A COLOUR MONITOR

A remarkable program is being released this month, offering 486 Spectrum owners a unique new puzzle and the chance of winning one of 46 superb prizes.

Flix is a game in which you have to reconstruct a picture by sliding its rows and columns of jumbled up squares. The puzzle is simple to operate, but teasingly difficult to solve.

So in conjunction with Softdisk, the producers of Flix, we're launching an incredible nationwide competition to track down the best puzzlers in the land.

Just look at the fabulous list of prizes we're offering to those who, on 31 October 1986, have solved the puzzle in the fewest number of moves.

What's more, readers of Personal Computer Games can use the £2 voucher printed on this page to buy Flix at a huge discount.

The competition works like this. When you get your copy of Flix, one of the pictures in it will be a jumbled up drawing featuring the logo of Softdisk and Personal Computer Games. Your task is to reconstruct this picture.

Full competition instructions and rules will be included with the cassette.

Every time you do a bit with Flix apart from solving the competition, the puzzle allows you to enter any screen picture you like and jumble it up. So you can head in the opening screen from any of your favourite games.

All in all, Flix is a beautiful program in its own right and should provide you with hours of interesting fun. But with the exciting competition we've lined up as a bonus, we reckon it's going to be the puzzle of 1986.

● Puzzle screen



● Competition screen unjumbled



● Puzzle screen jumbled



● CANNY SCOT

Flix is the work of a 17-year-old Scottish university student, Gary McGILL, the latest in a growing number of up-and-coming star programmers.

● FLIX OFFER VOUCHER

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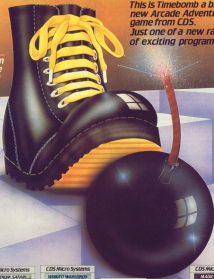
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Our intrepid reviewer, Peter Connor, braves fireballs, deadly custard pies and vertigo to answer the burning question

Are you a man or a mouse? An enormous hairy gorilla has just stolen your sweet little girlfriend. Can you sit there and let this monstrous ape kick sand in your face? Or will you flex your puny little muscles, grit your teeth and go off to the rescue?

If you have no stomach for the job then there's not much point playing any of the many Kong games now available, because this is a game that takes guts. The diminutive hero must pit his wit and agility against the brute force of his simian adversary; it's brain against brawn as you try to get beauty from the beast.

Love-sick gorilla

The original inspiration for the Kong game was, of course, the film 'King Kong' in which blonde starlet Fay Wray was abducted by the lovesick gorilla. Kong followed her to New York and sought refuge at the top of the Empire State Building where his downfall was eventually brought about by the rather pitiable US Airforce.

When, 50 years later, Kong arrived as a game in the 1980s the Empire State became a load of old girder. The gorilla though are arranged on several different screens, thus providing a variety of dangers for the player to negotiate before sending Kong to his doom and providing himself worthy of the girl.

Barrels and fireballs

These obstacles vary slightly from game to game but they are essentially the same. First, of all Kong rolls barrels down a series of inclined girders up which the hero is trying to climb.

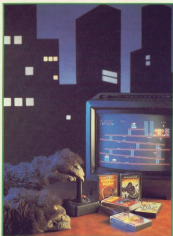
To avoid them the hero is gifted with enormous jumping ability and one of the main points in any version is how well your man leaps. Is he smooth? How far can he go? Can he jump backwards?

These are just a few of the questions that the dedicated Kong'er will ask himself before even considering whether a game is worth buying.

Other hazards to be found on this first level, especially dangerous when trying to climb the ladders linking the girders, are fireballs; these are more troublesome than barrels as they have a habit of following you. Handy in this case are the banners often hanging around with which you can quickly 'bank' on money or two.

On the second level the player is usually confronted with the problem of conveyor belts which move him in the direction of a vat of boiling oil. In some versions, though, this location is a pit

WHO'S KING OF THE KONGS?





factory with lethal contact parts and a vat of what is presumably boiling caustic.

Further on, the problem is how to get to the top of a series of unconnected girders. The only way up is to jump on lifts as they move up and down. Needless to say, there are always nasty creatures pursuing you.

Happy ending?

On the fourth, and usually final, level the hero has to make around an arrangement of girders knocking out the pegs which support them. If he succeeds, Kong tumbles to his death and he gets the girl for evermore. What happens then is not really our business here.

For the home video the newest version to the arcade is *Donkey Kong* for the Atari. You might expect this, but even so it is a remarkably good game. The graphics have a clarity that is worthy of the arcade, with impressive colour and sharpness. Kong himself is a mean-looking railroad who beats his chest in frantic anger. The girl who is the cause of all the trouble seems well worth fighting over in her purple and blue dress.

Your hero, Mario the carpenter, is also a very accomplished figure. In fact, he is one of the most manoeuvrable figures in computer games. His running and jumping are a joy to behold, and he will even, given a little nifty joystick work, jump backwards. In *Kong*, this sort of thing counts for a lot. It's no good buying a game where your man can't even jump over a barrel.

Smart ape

The sound too in this version is pleasing, with jaunty tunes and good sound effects. All the features of the arcade game are there in splendid graphics. At the top level the ape even summons up enough horsepower to switch the dam from side to side, making your task just that little bit more difficult.

However, not everybody has an Atari and not everybody who does is willing to fork out a small fortune for the software. Not owners of other machines need despair: there's no shortage of *Kongs* for the leading micros.

For the Spectrum there are at least three versions available. *Donkey Kong* has long been a best-seller and it's by no means a bad version.

The graphics are clear with strong bright purples, yellows and blues. Your man himself is quite cute as is his kidnapped girlfriend, but Kong, unfortunately, looks more like a goliath than a fearsome gorilla.

All the necessary obstacles are there. On level one the barrels come raining down pretty quickly but since your man is a good jumper it's not too difficult to overcome them.

Level two is a bit puzzling. Are those things on the conveyor belts meant to be footballs? Or are they perhaps pigs? Vats of flaming oil possibly? I'm sure I don't



'This is a game that takes guts'

know what they are.

The last two levels hold no surprises except that the girl seems to disappear from time to time making you wonder why you're going through this hell.

But it's gratifying all the same when you knock out the last pin and send the ape for the Kong Goodbye.

Blasty's Killer Kong is of a similar standard. The graphics are very clear and colourful in red, green and yellow. The rather unattractive girl is exactly half green and half yellow. The little hero is, poor thing, slightly bow-legged but despite his handicap he's a game jumper.

Kong stands at the top, glowing with his hand on his hips like an angry mother-in-law. When you get to the top of the first screen you get a big kiss from the girl and two pretty hearts appear.

A curious innovation in this version is the replacement of the bananas (banking for the use of) by bones, hamburgers. They must be a strange flavour since

Gorilla warfare - first version of Kong reaches from (top to bottom) *Donkey Kong*, *Kong*, *Killer Kong* and *Killer Kong*.

they're a shade of green. I've never seen a MacDonaldis.

The most impressive feature of this game though is its sound, which is much better than in any other Spectrum *Kong*.

Convincing

Killer Kong, from P.S.S., starts off very well: the title page displays a disappointingly convincing picture of a slathering gorilla. This can lead to a certain amount of disappointment when the game has loaded, since the real Kong is a rudimentary figure with no such frightening detail.

Your man is not too impressive either, although he jumps well enough he doesn't look as if he gives a damn about reversing the girl. On the other hand, here - for that is her name - is not half bad and seems worth the trouble.

The game, though, does have some engaging features. When a barrel drops on your head and you meet your Maker a guarantee appears on which is inscribed R.I.P.

The game starts quite slowly but gets much faster as your man moves through the levels and the pics, conveyor belts and lifts. On the whole the graphics are well up to scratch.

Too fast

Colleen's *Willy Kong*, also for the Spectrum, was unfortunately christened. Willy by name, Willy by nature. The graphics in this game are not bad and Willy himself is an engaging enough fellow even if he does seem to have his hands tied behind his back and to be doing deep knee-bends. The problem is that the game is far too fast; it took me a long, long time to reach level two and then, when I finally made it, the program went and crashed on me.

The less popular version isn't *Kong* too either although there's not as much choice as for the Spectrum. Marvelous *Donkey Kong* for the Dragon 32, is an enjoyable version, as the blurb says, it's 'hundreds of fun'.

You have a very nice little man trying to save a very nice little girl. The gorilla is big and blue and gloriously rolls on the barrels. The graphics, in fact, are good throughout this game, but it's the sound which is especially fine with a rattling organ background.

All the usual obstacles are there as well as the usual bonus objects, such as the young lady's handbag. A nice detail is the flashing 'I' which warns you when your landing time on the hammer is about to run out. A drawback is the Dragon's joystick, since it's not self-centring it's very difficult to keep control of your man.

Even *Donkey Kong* can play the game, or one game at least. Steven Goldwater's



Dinky Kong. But they should only buy it if they're absolutely desperate to monkey around with a Kong. There's no joystick option, and you're forced to use the dreadful Disc controller.

Unless the hemisphere of your brain are opposite to the normal position, you will find it very frustrating. There's also a terribly long gap between passing the speed bar and your man jumping.

The graphics don't make up for the unresponsive controls. The barrels are empty circles and the big K himself is just the nearest outline. Furthermore, when you stay awake long enough to get to the top of the first screen you find out you have to go through it all over again. I'd rather spend an hour in the apothecary at London Zoo than play this game again.

Smooth action

As far as I know there's only one version available for the BBC. Fortunately it's excellent. Program Power's *Killer Gorilla* features the best graphics, except for the *Arat* of any name.

The colours are very bright and the action is really smooth. The homicidal ape is a vibrant shade of bright red, while your girl is a pretty little Goldilocks. Sound, too, is very good although it can become annoyingly repetitive if you don't quickly make progress.

There is the conventional order of screens, once you have done for Kong on the highest level you start all over again but at a much faster speed. There are few more satisfying barrel-banks in the business than *Killer Gorilla*.

Ape hunters with a Commodore 64 are faced with rather more choice; the quality, though, doesn't match the quantity.

For instance, the most striking point about *Arat's* Kong is the size of your man's nose; it's an enormous waddling protrusion which rather distracts your attention from more important issues.

Another curious feature is that instead of a hammer for bonking you've given a mallet, as if you wanted to invite your old chum Kong out for a game of croquet.

On the other hand, level one does have some good grinning fishbuds which leap out of their can to grab you. Your man, though isn't easy to control, sometimes behaving very erratically at crucial moments.

Moving

Kongo Kong, from Megal, also has rather unsophisticated graphics, but they are at least very clear. Your smart man emerges from a little pink house and is very easy to control. When he gets to the top of a screen a heart appears and a love theme from Tchaikovsky is played. It's very moving.

This version is quite slow on level one but does get much quicker. On later screens there are some original features such as hostile birds and magic keys. Overall it's a pleasant version, scoring

GAME: KONGO KONG £6.95
MACHINE: COMMODORE 64

GRAPHICS	5
SOUND	5
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: WALLY KONG £5.95
MACHINE: SPECTRUM 486

GRAPHICS	5
SOUND	4
EASE OF USE	2
LASTING INTEREST	2
OVERALL	3

GAME: KILLER KONG £3.95
MACHINE: SPECTRUM 486

GRAPHICS	4
SOUND	2
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: KONG £7.95
MACHINE: COMMODORE 64

GRAPHICS	5
SOUND	5
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: DRABY KONG £6.95
MACHINE: ORIC 486

GRAPHICS	3
SOUND	3
EASE OF USE	3
LASTING INTEREST	3
OVERALL	3

well for playability.

Supercell's *Crash Kong* is very disappointing. The graphics look like something for the first colour ZX81 and the sound is little better, consisting of a repeated Laurel and Hardy tune. The girl is an unsympathetic creature with silly piglets and Kong is no more attractive; they were a good match. If I were Mario I'd let her go.

The verdict

So which Kong is King? There are reasonable versions available for most merits but few outstanding ones. Despite the choice for Spectrum and Commodore 64 owners no single game is clearly superior. *Arat's* game has ob-

GAME: KONG £3.95
MACHINE: SPECTRUM 486

GRAPHICS	5
SOUND	5
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: CRASH KONG £3.95
MACHINE: SPECTRUM 486

GRAPHICS	5
SOUND	4
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: CRASHY KONG £3.95
MACHINE: COMMODORE 64

GRAPHICS	3
SOUND	3
EASE OF USE	5
LASTING INTEREST	3
OVERALL	3

GAME: DONKEY KONG £39.95
MACHINE: ATARI 400, 800, XL

GRAPHICS	5
SOUND	5
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: KILLER GORILLA £7.95
MACHINE: BBC

GRAPHICS	5
SOUND	5
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

GAME: DONKEY KONG £8.90
MACHINE: DRAGON 32

GRAPHICS	5
SOUND	7
EASE OF USE	5
LASTING INTEREST	5
OVERALL	5

vious advantages but when you consider the price of *Arat* software enthusiasts might wince. The choice then falls on Program Power's *Killer Gorilla* for the BBC which stands out for the quality of its graphics and its smooth playability; this Kong's certainly no donkey. ■

Steve Cooke experiences the exciting games potential of the new machine from the East

SPECTRAVIDEO

I always happens at parties. There you are, extolling the virtues of your British-built Spectra, 180C, 180C or whatever, when up comes some twerp clutching a gin and tonic, who then grabs all the attention by announcing the death of the British continent industry.

Our native hardware manufacturers, he says, are about to turn tail and fly like kowings in the face of the Great Oriental Invasion. What can you do? Thrust his gin and tonic down his throat, as agree with everything he says.

If like me you'd just spent two weeks playing with the Spectravideo, you've find yourself agreeing with everything he says. It's not just that the Spectravideo is a good machine, it's an excellent one, and must be considered a serious contender in the sub-£200 home market.

Indeed with a built-in joystick and excellent graphics facilities, the Spectravideo looks tailor-made for game players.

The trouble is, the machine's useless unless there is a good supply of software either currently available or on the horizon. To put it bluntly, if you buy a SpectraVideo today, will you be lacking software in six months time?

A quick 'phone round the country's major software houses indicates a great deal of interest in the Spectravideo, with many programmers musing hither about the machine and what they hope to do with it.

Of course if it doesn't sell then no-one will touch it. But potential buyers can take comfort from the fact that the machine is already a big hit in America, that production lines in Hong Kong are rolling with customer-oriental efficiency, and that a new company has just been formed in this country to handle distribution.

There are already 30 titles available on cartridge and cassette, and negotiations are under way to commission further programs. An adaptor can be bought to run Commodore games and the MSX standard could well attract a broad software base over the next couple of years.

The machine comes in a scenic package, complete with user manual, power supply, tutorial cassette, modulator to provide output to a TV, and all necessary leads. One nice touch is the inclusion of an aerial splitter so that you can leave your TV antenna plugged in along with the computer, and select either at the flick of a switch.

Once switched on, the system throws a few invisible logs on to the screen and

adds some swelling colour effects in an attempt to impress you with its virtuous character.

Having introduced itself, the machine then clears the screen and dumps you in Basic command mode with a bright blue background and white text, a copyright message and a rather ominous statement to the effect that you have only just under 13K of memory free for Basic programming.

For a 12K machine this comes as something of a disappointment. 12K is taken by the display and although the accompanying literature claims that a remaining 18K is user-available, this is a little optimistic. A RAM upgrade is however already in the shops.

At this point, the first-time user will pick up the manual and start stalling at a few keys in an effort to find out what he can do with his IDE. He's in for a couple of exercises.

The first surprise is the keyboard. Despite the poor reputation attached to rubber keyboards the Spectraidon's is pleasantly responsive and reliable in operation. The key-out is well thought-out, and there are five easily defined function keys, each with a second definition accessible under the Shift key.

The current definitions of all these keys are listed at the bottom of the screen. If you're used to a Spectrum or an Oric, for example, you'll find entering Basic programs on the Spectravisors far more attractive.

The cursor joystick is a very useful addition, both for games playing and the editing programs lines. All the keys have an auto-repeat facility.

The second surprise for the first-time user is not such a pleasant one. The manual supplied with the SW-100 is excellently laid-out, in a sturdy ring-binder. It inspires confidence by its appearance but the contents can only be called a disaster.

If you are unfamiliar with Basic, you will be even more unfamiliar with it once you've read the manual. Sample programs are listed with missing lines; there are frequent misprints, some of them seriously misleading; and last and most importantly the manual gives a totally inadequate explanation of the Basic syntax of SpacetimeEditor Basic.

The manuals have apparently been rewritten, but you should check that this is the case before using them.

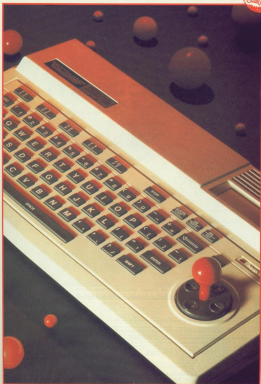
The poor standard of the documentation is all the more deplorable in view of the excellent version of Basic available on the machine. The Spectravideo has a tested and tried hardware configuration that gives the programmer easy access to excellent sound and graphics. So some excellent names could be on the way.

With a machine like the Commodore 64, the hardware is let down by the limited basic commands available and you have to spend a lot of time running and running about in the memory to achieve the desired effects.

[illegible]

In addition, there are a number of special functions for integer conversion, I/O, and file calling in C code routines.

[illegible]



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for
Spectrum
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Screen shots, ratings and our panel's expert verdicts

90 NEW GAMES ON TRIAL

**WELCOME TO THE FATTEST GAMES REVIEW SECTION
IN THE GALAXY!**

Wesley Dale, Chris Anderson, Peter Connor, Steve Cooke and Stuart N Cooke have been incessantly hammering at keyboards and clawing at joysticks in their determination to give you the lowdown on all the latest releases.

There were so many good games this month we were hard pressed to decide which ones deserved the coveted PCG hit label. And as for the Game-of-the-Month – we've really splashed out this time.

GAME	PAGE	GAME	MACHINE	PAGE
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Arctus IX	BBC	83		
Arctus X	BBC	83		
Arctus XI	BBC	83		
Arctus XII	BBC	83		
Arctus XIII	BBC	83		
Arctus XIV	BBC	83		
Arctus XV	BBC	83		
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Abstract



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GAME: 3D MUNCHY
MACHINE: BBC
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: MWA SOFTWARE
PRICE: £4.95

3D Munchy is a fast and enjoyable game based on Pac-Man but with a number of

variations that succeed in giving new life to an old idea.

The game takes place in a simulated 3D maze, and you have to beat the clock as well as the ghosts. This is made particularly difficult because not only do the ghosts move quite quickly, but from time to time they dig holes in the maze which you cannot cross.

For this reason you are provided with

three shovels with which to fill in the holes, but each shovel can only be used once.

Eating power pills turns the ghosts blue, with the usual results, but time is short and you are advised to stick to the task of clearing the maze rather than waste it chasing the opposition.

I have to admit to loss of interest in Pac-Man-type games, but I did enjoy

GAME: PROTEANS
MACHINE: BBC
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: ELECTRONICS
PRICE: £5.95

Proteans is a fast and furious version of the old arcade favourite Galaxian, in which you have to light off the enemy

sweeping aliens with your rapid-firing laser.

The scenario in this case has you landing on the planet of Pologosa, whereupon you are viciously attacked by hordes of Proteans dropping their deadly Gyroco bombs.

These Proteans really are very nasty customers. They fire so quickly that it takes a long time before you get through to even the second wave.

Even more alarming than their firing speed is the Proteans' habit of coming down to the ground and settling if you don't finish them off quickly enough.

After a brief rest they return to the sky leaving an imperishable stream of Gyroco bombs—quicker refuelling than mine any needed to contend with this kind of thing.

The Proteans themselves are invader-type creatures in a variety of heights

GAME: VORTEX
MACHINE: BBC
JOYSTICK: OPTICRAE
CATEGORY: ARCADE
SUPPLIER: SOFTWARE INVASION
PRICE: £7.95

Vortex is a fast 3D space shoot-out,

where waves of attacking alien ships speed towards you from the centre of the screen, fire, and pass on. The display uses the Beeb's high resolution mode and is in black and white.

You control your craft, positioned at the bottom of the screen, using the 'A' and 'X' keys to move left and right. Your speed increases steadily the longer you

manage to stay alive as you plunge through space, subject to the irresistible attraction of a black hole.

After each attack wave you find yourself in the middle of an interval screen. Your lasers are inoperative and the asteroids move out from the centre alpha screen. They are not easy to avoid and like everything else they get faster as the

GAME: DAREDEVILS
MACHINE: BBC
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: AUGUSTA
PRICE: £7.95

Daredevils is really a version of Scramble, with a few innovations.

You fly a plane over a mountainous landscape using the 'W', 'X', 'Space', and 'Shift' keys. Enemy aircraft may be dispatched using either your nose or tail guns as appropriate and these are fired using the 'Return' and 'Copy' keys.

Hostile gun emplacements, positioned at random intervals, take the occasional pot shot at you, which must be avoided if you're not to lose one of

your five lives. The game may also be bombed, using the 'Tab' key.

No surprise so far for Scramble addicts, but every so often you find yourself flying over a lake, and this is where the game throws a few original touches.

A range-finder flashes up at the top of the screen and as soon as it shows zero you drop your bomb, which with any

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GAME: CHUCKLE EGG
MACHINE: BBC, DRAGON, SPECTRUM
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: A & P SOFTWARE
PRICE: £7.95 (SPECTRUM £8.95)

Chuckle Egg is an excellent game available for three different machines. The BBC version has better graphics than the others, but the Spectrum and Dragon versions are quite acceptable.

The screen is divided into levels joined by ladders and is patrolled by three ducks who move up and down the ladders in search of piles of corn which then turn comets.

You control a little man whose task is to collect a number of golden eggs as quickly as possible, and preferably before the ducks have polished off all the corn.

Once you have cleared the screen you get a bonus depending on how much corn you have managed to save. There is also a time limit and ignoring it costs you one of your five lives.

There are eight screens and the fourth or you progress the more complex the screen layout becomes, with moving platforms, ladders going up/down and eggs hovering mysteriously in mid-air. Oh, and I forgot to tell you, the ducks may look cute, but they kill on contact.

There is no joystick option on this game, but ten marks out of ten to A & P Software for allowing you to choose

your own movement keys.

Not all the keys are available, and forbidden keys will vary from machine to machine, but this facility adds greatly to the enjoyment of the game. If only other software houses would follow this example...

Chuckle Egg is simple, highly addictive, and great fun to play. Easy enough for kids and challenging enough for adults, it's worth every penny. **9C**

GRAPHICS	3
SOUND	4
EASE OF USE	10
ORIGINALITY	7
LASTING INTEREST	3
OVERALL	8



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3D Manoby.

Because of the limited number of screens available and the large number of holes, you have to plan your route carefully if you're not going to end up trapped in a corner.

The key layout is scalable and there is a hit-score table which defaults to 10,000. I spent an enjoyable two hours trying to reach that target, and rate 3D

Manoby a good buy at £4.95.

SC

GRAPHICS	5
SOUND	4
EASE OF USE	5
ORIGINALITY	3
LASTING INTEREST	5
OVERALL	5



primary colours. When excited they like to twitch their claw-like legs in anticipation of blowing you to the four corners of the screen.

They come in nine slightly different forms and 34 different levels of difficulty. I frankly admit that the higher levels of the game remain a mystery to me.

The exceptional speed of this game, together with its ear-splitting sound and sharp graphics, make *Protons* a chal-

lenging version of an old favourite.

PC

GRAPHICS	7
SOUND	7
EASE OF USE	7
ORIGINALITY	6
LASTING INTEREST	7
OVERALL	7



game progresses. Collision loses you one of your three lives.

The sound effects are particularly effective at this stage of the game, but there is a silent play option should you grow tired of them.

Vertex is a fast, exciting game with some of the better 3D effects available on the Beeb. Recommended.

SC

GRAPHICS	6
SOUND	7
EASE OF USE	6
ORIGINALITY	3
LASTING INTEREST	7
OVERALL	7



luch will bounce along the surface of the lake and destroy the dam at the end.

Altitude is also marked, and to increase your chances of a hit you have to move up and down until two dots on the surface of the lake join together.

Then it's 'bombs away' - but the program warns you that the range-finder 'was developed in a hurry and therefore doesn't work all the time'.

SC

GRAPHICS	5
SOUND	5
EASE OF USE	4
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	5



PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT •



MORE GOODIES FOR THE BBC MICROCOMPUTER FROM RH ELECTRONICS

The RH Lightpen is compact, little bigger than a felt-tip, it is versatile, with a sophisticated microswitch at its joint which responds to the slightest pressure, and an LED lamp at the user's end to indicate data transmission. Both microswitch and LED are fully programmable.

The RH Lightpen is reliable, with a rugged metal case to provide physical and electronic protection. Its sensitivity can be adjusted to the thickness and type of your TV screen, giving the highest levels of accuracy.

With the lightpen connected to your BBC Micro you can draw lines on the screen, or give commands simply by pointing to a menu.

Colour-graphic software

This additional software is available so that all the colours of the BBC Micro's palette are available at the tip of your pen. Complex graphics can be created in minutes.

Art-Ian software

This program is guaranteed to bring out the artist in you. It provides inspiration for users of the lightpen and provides full interaction between pen and screen.

Lightpen (C6.95)

40 crash disc version of lightpen software (C6.95)

Colour-graphic software (Image) (C9.95)

Art-Ian software (Image) (C9.95)



RH Electronics has a whole series of excellent software for the BBC Microcomputer Model B. It is for games, business and education, they can be highly varied by any BBC Micro owner.

Pilgrim: People Pleaser (C8.95)

Stop the Pilgrim's path of destruction by wailing thronon. A game of skill (one level) and cunning.

Galactic Wipout (C6.95)

Fight off alien invaders and monster - devours as you transport the survivors of the human race to a new planet.

Shi Slalom (C8.95)

Guide the skier through the 40 gate course avoiding obstacles on and landing skis safely.

Viper (C6.95)

Guide the snake around its electric cage devouring as much food as you can. Avoid touching the electrified walls, swallowing unnecessary food or causing the snake to eat its own tail.

3 in 1 (C4.95)

This set of three games for the younger enthused includes: Task Force - a strategic battle of sea and air; Demolish - blast your way to freedom avoiding radioactive fallout and falling masonry as you go; Cosmos - where you have to defend the earth from an invading battle fleet.

IQ-Master (C6.95)

The program uses the quiz format containing the elements of fun with educational teaching. 100 questions may be programmed by the teacher, divided into eight subject areas of 30 questions each. Questions and answers can be changed as often as you wish. The computer will tell the pupil whether he or she has the correct answer or not, but cheating is prevented as pupils cannot access the program to find out the correct answers. The scores of up to 40 pupils are stored in the quiz memory and are easily recalled for comparison.

Snail Trail (C6.95)

Help the snail escape from the snail's hole into before he returns to death. There are two skill levels for this cassette.

Databank (C1.95)

A cassette for the business or home. It enables you to file, sort and access a great number of items such as diary entries, addresses, telephone numbers, accounts or other information.

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GAME: EAGLE EMPIRE
MACHINE: BBC
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: ALCATA
PRICE: £7.95

Eagle Empire is a no-surprises version of the arcade game *Phoenix*.

Don't let the lack of originality put you off, it turns out to be a good game. Easy enough to get a decent score on, but challenging enough to tempt you back for another go.

The first screen features tumbling slots who zoom about the screen to musical accompaniment as you blast away at them with your laser.

The Z and X keys move your laser beam left and right respectively, and you



use the Return key to fire.

If you get into trouble at any time during the game you can switch on shields by pressing the Shift key, but you can't move as fast while they are in force.

The second screen is the same as the first, but your laser is given a repeat fire facility which enables you to clean up

GRAPHICS	4
SOUND	2
EASE OF USE	2
ORIGINALITY	1
LASTING INTEREST	5
OVERALL	5

the little devils more efficiently.

In the third and fourth screens you do battle with blue and pink eagles who must either be hit dead centre, or else hit three times before they disappear from the screen with a satisfying ping.

If you survive the first four screens then you can have a crack at the Master Alien himself. I found the Master Alien a little too eager to give up the ghost, and after blasting my way through four screens I wanted a more exciting showdown.

BBC

GAME: CYLON ATTACK
MACHINE: BBC
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: A&P SOFTWARE
PRICE: £7.90

Cylon Attack is excellently documented with twelve screens of instructions and an impressive status display covering everything you need to know to stay in the game.

It also offers a joystick option, a difficulty hi-score table which can be used to tape and even a choice of different key layouts for left and right-handed people. All very impressive, but what about the game?

You find yourself on board an Earth supply ship in some unidentified corner of deep space when suddenly the Cylons



attack. Come, come, you weren't expecting that, were you? Ejected from the mother ship in a small interceptor craft, your task is to negotiate a settlement with the Cylons by hitting the space-bar and blasting them into small pieces.

The Cylons will take the occasional

GRAPHICS	3
SOUND	4
EASE OF USE	9
ORIGINALITY	3
LASTING INTEREST	4
OVERALL	4

shot at you, but unless your shield energy has run out they cannot harm you. If you start to run out of fuel you may retake with the mother ship during a game and refuel, but shields are only replenished at the end of each attack wave.

Despite the excellent presentation of this game, I found killing Cylons rather tedious and repetitive. There is a £200 prize for the highest score, but sadly this program doesn't have much else to offer.

BBC

GAME: DIAMOND MINE
MACHINE: BBC
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: A&P SOFTWARE
PRICE: £4.95

Diamond Mine is simple in concept and the graphics are nothing special, but I found myself spending a long time at the keyboard. This is one of those surprising little games that always manages to tempt you back for another go.

Using the Z, X, = and / keys you must guide a pipeline down through a maze in an attempt to reach the jewels that are lying there.

You cannot get the pipe to go back on itself, and you mustn't let it touch the walls. If this wasn't difficult enough there are four little monsters patrolling the maze who will take a mouthful of pipe if they come across it.



Contact with wall or beast results in your pipeline being withdrawn from the maze, at which point you must start again from the top.

You start the game with 5,000 feet of pipe, and lose a length every time it collides with anything other than a jewel. Exactly how many feet you lose depends on how much pipeline has been let out at the time.

GRAPHICS	4
SOUND	3
EASE OF USE	6
ORIGINALITY	5
LASTING INTEREST	7
OVERALL	5

There are eight jewels to start with, and if you manage to reach one the machine gives a whop of excitement, the pipeline turns blue, and the diamond is whisked back up to the top of the screen.

Some of the jewels are harder to reach than others and some more accordingly. There is a hi-score table (which defaults to a challenging 10,000) and a new screen appears if you succeed in clearing three mines in succession.

Diamond Mine is a simple game but quite a find for all that.

BBC



GAME: DRAGON RIDER
MACHINE: BBC MODEL B
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: SALAMANDER
PRICE: £6.50

Fancy riding a dragon from its lair in the Black Mountains into the wild blue yonder? Of course you do. Fancy play-

ing a slow, boring game, written in Basic, that's about as challenging as a game of one-player Snag? Of course you don't. Well, I've got bad news for you...

Salamander's program just doesn't make the grade. You control a dragon as it flaps ponderously about the screen, and by pressing the 'B' key you can fire at some rather indistinct graphics shapes as they move slowly from the top of the screen to the bottom.



GAME: HEIST
MACHINE: BBC MODEL A + 32K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: SOKTAPOT
PRICE: £7.95

Weir has two copyright notations on the cassette slip and another warning that

flashes on to the screen when you load the game. Soktapot are obviously concerned about people robbing the bank, which is what this program is all about.

When they built this particular bank they forgot about putting on the stairs, so the floors are joined by ladders. You control a little man whose task is to run up and down the ladders collecting bags of cash before the burglars can get their



GAME: THE STOLEN LAMP
MACHINE: BBC
JOYSTICK: NO
CATEGORY: ADVENTURE
SUPPLIER: MC LOIDLORIN
PRICE: £8.99

If you enjoy flying magic carpets over endless expanses of desert, or wander-

ing hopelessly in a maze of deserted catacombs, then you will enjoy the search for Aladdin's lamp.

But if you are easily discouraged by such activities then you should avoid this program like the plague.

You should also avoid this program if you like your adventures to unfold more than two words at a time, and if you are female.



GAME: BIRDS OF PREY
MACHINE: ELECTRON
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: BOMK
PRICE: £8.99

Here they come, in glorious flickering white, yellow, and red, rambling down

across the screen. It's the fearsome Scorpions... the Kamikaze Birds... it's... oh... it's Galaxians.

Yes, by kind invitation of Romik Software, the Galaxian tribe are preparing to invade your Electron. They give notice of their arrival with some rather scruffy looking title screens, and give a quick demonstration of acrobatics before making their exit.





BBC • ELECTRON • BBC

If they hit the bottom of the screen there is a noise like an explosion and a bit of the ground disappears.

Your dragon only has a limited amount of energy, and changes colour as it gets tired. Once it turns black you have only a few seconds left, unless you get it down to earth and land it on a magnet-coloured rock where it can feed and replenish its energy.

You have to manoeuvre it carefully into exactly the right position before it

will start to eat.

If all this is too difficult for you, you can try pressing the 'F' key, which releases the dragon's fiery breath and wipes out two or three of the enemy at once. This uses more energy and the game finishes sooner, so I suppose there is something to be said for it.

The highest skill level does little to improve the game, except that the dragon runs out of energy quicker. I'm afraid I ran out of interest long before

my last dragon ran out of breath. **SC**

GRAPHICS	3
SOUND	4
EASE OF USE	4
ORIGINALITY	3
LASTING INTEREST	3
OVERALL	3

lands on him. The little chap can't manage more than one bag at a time, so as soon as he's got one he has to nip downstairs and pay it in the safe.

To help him fight off the burglars there are a couple of hammers which can be picked up and used to smite the impudic. Once he's got all the bags stashed away, the screen clears, and then points up the word 'Hullohulloh'.

The little chap then has a quick social with one of the burglars and then it's off to the next screen, with the same objective.

The burglars are very intelligent at the higher levels, firing so often they plant a bomb at the top of the screen which you must reach before it explodes.

Not a bad game at all, this one. And you don't have to rob the bank to pay for

it, either. **SC**

GRAPHICS	7
SOUND	7
EASE OF USE	6
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	6

At one point in *The Steiner Lamp* you encounter a 'girl'. No objection is made if you 'Take girl' and if later you want to 'Drop girl' you find that someone turns up and snatches her up. This relegation of women to the status of carpets and candles could have been easily avoided.

Finally you should avoid this program if you like your adventures to have split-screen graphics, large resolutions,

and consistent responses. The *Steiner Lamp* has none of these.

You can either have graphics (where available) or text, not both. The vocabulary is so small it doesn't meet understanding words like 'Give', 'Go', 'Enter', or 'Examine'.

The only thing this program has in its favour is the potential of the idea. A potential that is unfortunately not at all

fulfilled. **SC**

GRAPHICS	1
SOUND	2
EASE OF USE	2
ORIGINALITY	6
LASTING INTEREST	4
OVERALL	3

Of course they do their best to destroy you before they go, dropping bombs and attempting to run your laser base.

Unless you want to finish the game with a score of zero you have to fight back, moving left and right with the 'A' and 'X' keys, and firing with 'shift'.

There are four levels of destruction and at the highest level the action is very fast, it's a bit flickery. You have three lives,

a pause control, and the option of a silent game if gravity can't stand it.

Every now and then a Death Bomb drops in, way outwards, dropping smaller bombs which make shooting it a risky affair. You don't have much choice, though, because if it reaches the bottom of the screen you lose a life.

Nothing new in this game, but if you don't mind rather small alien it looks

like a good buy. **SC**

GRAPHICS	4
SOUND	3
EASE OF USE	4
ORIGINALITY	1
LASTING INTEREST	4
OVERALL	4

GAME: FELIX IN THE FACTORY
MACHINE: ELECTRON
JOYSTICK: NO
CARDPORT: ARCADE
SUPPLIES: PROGRAM POWER
PRICE: £7.55

What do Stuart the Dog and Biffa have in common? They both appear on the hi-score table at the beginning of this program. I think they both cheated.

Actually it's not a bad game, this. Even deserves to be played by humans as well as dogs. You guide Felix up and down ladders as he sniffs his for a small can of oil to top up the generator at the bottom of the screen.

Once he's found it he has to rush down and fill up the tank, otherwise the generator goes to a halt, at which point

Felix dies from shock.

To make matters more complicated, the factory floor is patrolled by Gremlins and the occasional rat. Felix can jump over the rat if he's quick, but the Gremlins will kill him if he meets them.

To help him in his task you can get him to pick up pitchforks and nail-pins as you move him about using the cursor 'arrow' and 'F' keys for left and right, and the 'A' and 'X' for up and down. Pressing the cursor 'up' key makes him jump.

Once he's armed with his pitchfork, Felix can pitch the Gremlins to their death below. Using the rat poison is more a matter of luck.

Once dropped on the floor it stays there unless a rat happens to cross that part of the screen, after which its demise is celebrated with bonus points.

At the bottom of the screen, between

the last ladder and the generator, is a conveyor belt which Felix must regulate before filling the tank.

Once he has completed his task a new oilcan appears somewhere on the screen and our luckless hero is off again to increase his score or die in the attempt.

This is a compulsive game with good graphics. Join Biffa and his pals at the keyboard if you can. **SC**

GRAPHICS	8
SOUND	5
EASE OF USE	7
ORIGINALITY	6
LASTING INTEREST	7
OVERALL	7



64 • COMMODORE 64 •

GAME: TASMAN**MACHINE:** COMMODORE 64**JOYSTICK:** OPTIONAL**CATEGORY:** ARCADE**SUPPLIER:** MINDDATA**PRICE:** \$3.65

It sounds interesting, run around eating as much money as possible while avoiding the tasman who are trying to make you bankrupt. I don't think Minddata will have to worry about tasman chasing them for the profits from this game because it is profitable.

Tasman is, of course, a variant on *Joe-Mac* and has all the usual features;



stars, dots and monsters. The tasman chasing you are small creatures with flailing arms who lurch behind walls before leaping out to grab you. If you eat

GRAPHICS	3
SOUND	3
EASE OF USE	6
ORIGINALITY	1
LASTING INTEREST	2
OVERALL	3

is like the tasman 'bow-down-to-you'.

Unfortunately the graphics are dull and colourless, while the sound is a total waste of the 64's facilities.

If companies are to carry on producing versions of *Joe-Mac* they have to make sure that graphics and sound are not just good but superb. **PC**

GAME: KICK OFF**MACHINE:** COMMODORE 64**JOYSTICK:** OPTIONAL**CATEGORY:** ARCADE**SUPPLIER:** MABLE BUS**PRICE:** \$5.99

A table football game on a home-computer doesn't sound like an evening prospect for either table football fans or micro enthusiasts, yet *Kick Off* is a compelling game - especially with the two-player option.

The title page of roaring fans comes



complete with the kind of dynamic melody that the top Brazilian table-foot-

GRAPHICS	4
SOUND	4
EASE OF USE	6
ORIGINALITY	2
LASTING INTEREST	5
OVERALL	5

ballers like to focus up to.

The screen then displays, in clear and colourful graphics, the table foot, with bars, players and goalposts. But *Kick Off*'s sound, after the opening flourish, is rather disappointing. **PC**

GAME: SUPERCOOPER**MACHINE:** COMMODORE 64**JOYSTICK:** NO**CATEGORY:** ARCADE**SUPPLIER:** MINDDATA**PRICE:** \$3.65

What do you do when an enemy power is going to explode a nuclear device and exterminate your country 'in a matter of minutes'? The answer is obvious: you load up a chopper with Special Service Troopers and go off to rub out the villains.

Supercooper is a three-screen game in which you must pilot the craft to the



destination. So the first screen is an internal view of the helicopter's cockpit, and the second screen is a radar map of

GRAPHICS	4
SOUND	3
EASE OF USE	4
ORIGINALITY	4
LASTING INTEREST	4
OVERALL	4

the helicopter's flight path.

Only on the third screen do you finally reach the enemy island and get the chance to do battle. But by then you may be so frustrated that you won't care if civilization ends or not. **PC**

GAME: TANK ATAK**MACHINE:** COMMODORE 64**JOYSTICK:** OPTIONAL**CATEGORY:** ARCADE**SUPPLIER:** SUPERDOTT**PRICE:** \$3.95

The only exciting thing about this version of *Tank Atak* is the blark. 'In a barren wasteland you must lead oil tanks from heat-seeking missiles and shot tanks in a final desperate struggle for survival.'

There is certainly the word to describe *Tank Atak*'s graphics: a few lines are supposed to represent the



mountainous landscape, while the tanks are large, green sitting ducks.

The player uses crosshair sights to aim his cannon at the enemy, who travels in

GRAPHICS	4
SOUND	3
EASE OF USE	5
ORIGINALITY	4
LASTING INTEREST	2
OVERALL	3

from the distance getting larger and larger. Then he shoots them.

When you destroy something you realize that *Tank Atak*'s sound is as disappointing as its graphics. Vaporizing tank produces a noise like stubbing a cigarette out in a bowl of water. **PC**

ODORE 64 • COMMODORE

GAME: SHIP OF THE LINE
MACHINE: COMMODORE 64
JOYSTICK: NO
CATEGORY: STRATEGY
SUPPLIER: RICHARD SHEPHERD
SOFTWARE
PRICE: £4.95

Richard Shepherd's *South* may not usually be called out for its literary contributions.

ment but Ship of the Line seems likely to be an eleven with all hands.

The graphics are poor and ineptly overwritten by the text, which is repetitive and uninspired, while the game itself is seriously limited in scope.

This is all the more unfortunate because the basic idea of the program has proved successful.

You order the game as a midshipman in the year 1803. Your task is to coordinate

an schließende Prozess pfligt. Eine normierte Version des Konstrukts wird als „Einkaufs- und Verkaufsprozess“ bezeichnet.

Battle consists of a series of broad sides from each ship until one side is too weak to continue.

Ship of the Line is described as an "adventurous strategy game", but it's not an adventure and not much of a strategy game either.

The only factors you are able to take into account during sales are the number

GAME: NICKELTYPE
MACHINE: COMMODORE 64
JOYSTICK: YES
CATEGORY: ARCADE
SUPPLIER: F.S.S.
PRICE: £7.99

Microtype is a kind of Sans-serif'd Fraktur, and it doesn't make sense to

you, a version of the Atari 400/800 game *Protektor*. If that doesn't make sense either, then I'll explain.

You, says the barker, are the GOOD GUY, whose planet Newtogo has been invaded by the BAD GUYS. Naturally, you must go and liberate these villainous invaders and get your planet back. But that's not so easy.

Das ist ein Beispiel für einen Fehler, der in der Praxis häufig vorkommt.

you pilot over an uneven landscape. Your opponents are located in various radar towers close to the ground and also whirl about in the air in the form of missiles. To destroy the towers it is necessary to first destroy a missile; this then gives you a shield which enables you to fly through buildings. So you jump down, blast the towers and get out quick. Since the shield only lasts

GAME: SLINGER
MACHINE: COMMODORE 64
ARTIST: TBS
CATEGORY: ARCADE
SUPPLIER: ALLIGATA,
INDIANAPOLIS, IN

'Blagger' is Cockney slang for rubber, and thus rubber means as a title for this

game, since it's a ripoff of *Master of Magic*.

Beginning in the bank, where the blagger has stolen his ring, the game progresses through 50 scenes until the hero – or villain, depending on which way you look at it – returns to the safety of his home with his ill-gotten gains.

And in Natchez, where there is a small number of houses the different business men come

www.elsevier.com/locate/ymbs

On the first screen there are electrified trees, walls, conveyor belts and also a malevolent trolley. Using the joystick to jump and move forwards you travel round the screen collecting the keys and have to manage to survive them.

The further across you will be attacked by rampant skulls, chomping jaws, evil tentacles and wickedly Chinese

NAME: OFFSPRING OF LONG
LANGUAGE: COMMONORE 64
POSITION: NICE/SLAY
CATEGORY: ARCADE ADVENTURE
SUPPLIER: P.S.S.
PRICE: £7.99

What happens if you leave Pac-Man and an adversary home together in a dish?

lensed room for a few hours? The chances are that, if they are at all friendly, they will end up spewing something along the lines of *Krystall of Zine*... or *Wanda Schwaner*!

What this means is that you get a traditional arcade game with the addition of the treasure-gathering element from adventures. It also means that you usually get the sense of both worlds.

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Krytals of Zang, though, is different. It has excellent graphics and a number of winning features which lift it out of the rest of Pay-Per-Click clones. Its arcade elements do not make for a strenuous test of intuition or intelligence, but do add to the fun of the game.

The inquiries are to be found in some of the various all sources. The source has

REC'D MIT * REC'D MIT * REC'D MIT * REC'D MIT * REC'D MIT * REC'D MIT * REC'D MIT * REC'D MIT *

NAME: PAIN KINGDOM WALKER
MACHINE: COMMODORE 64
JOYSTICK: NO
CATEGORY: ADVENTURE
SUPPLIER: BUD-BYTE
PRICE: £5.50

This is a great advantage. I've been playing it on and off for a week and still haven't tired of it. It has a reasonable vocabulary, excellent graphics, and some exciting possibilities.

You start outside your rented cabin in Twin Kingdom Valley and your objective is to amass as much treasure as you can.

If this sounds depressingly familiar, don't be put off because the same is

ruined and original. Some situations demand that you forfeit whatever treasure you have collected, while others offer you interesting rewards in return for challenges undertaken.

At no point does this adventure degenerate into a mindless game of the "let's find yet another bag of gold variety."

Every location has a picture and there are an impressive number of display options which can be changed at any time. Don't skip the graphics - they're excellent (some with animated sprites) and most draw in under 10 seconds, which makes them the fastest I've seen.

Other creatures come and go as you wander about. They are usually friendly and will give you whatever they have if you ask them for it. Others, more common

an even smaller group of people give them further assistance.

Your environment ranges from sandy beaches and deserts to caves and waterfalls. Twin Kingdom Valley is a big place and it's easy to get lost, so map-making is advisable.

This is a game that will appeal to novices and experienced adventurers alike. Highly recommended. **A-**

GRAPHICS	F
SOUND	None
EASE OF USE	5
ORIGINALITY	5
LASTING INTEREST	5
OUTRAGE	5



RE 64 • COMMODORE 64

of men under your command and your supplies of food and ammunition.

When at sea your only options are to continue in the same direction, engage in battle, or return to port.

During play the program lacks entry validation, so if you enter 'Attack' instead of 'Attack' you find yourself reversing in the opposite direction.

Ship of the Line is a great idea, but poorly implemented. Old sea-dogs may

appreciate the game, but the rest of us should be content to miss the boat. **PC**

GRAPHICS	3
SOUND	2
EASE OF USE	4
ORIGINALITY	5
LASTING INTEREST	3
OVERALL	4



live seconds even at the lowest level - this is rather odd then done.

Necrotype has four combat zones, each with different opponents. The graphics and landscape are remarkably good with arcade-quality definition.

Although Necrotype is a fine shoot-'em-up it would be improved if the player had a scanner to survey the enemy, and if the game occupied rather

more of the screen than it does. **PC**

GRAPHICS	6
SOUND	2
EASE OF USE	4
ORIGINALITY	4
LASTING INTEREST	5
OVERALL	2



coolies. It's not at all very escape there, making this one a tough struggle.

All these mummies are created in very clear graphics and present the player with a stiff test of skill. Unfortunately, rather than 50 entirely different scenarios the opponents make several appearances.

However, if you liked Mummy Mover, Bigger will undoubtedly appeal to you,

despite its repetitive sound. **PC**

GRAPHICS	6
SOUND	4
EASE OF USE	5
ORIGINALITY	4
LASTING INTEREST	2
OVERALL	2



right levels, each with nine rooms.

To enter the rooms you must find the key which corresponds to the colour of the maze. Since the keys are distributed randomly, this can take quite some time.

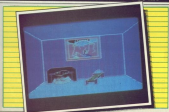
Guarding the treasure are snakes, bats, spiders and mummies. The snakes, in particular, are very fetching monsters. They animate nastily and when they have devoured you they seem to stare in

a very supernatural fashion. **PC**

GRAPHICS	6
SOUND	2
EASE OF USE	2
ORIGINALITY	6
LASTING INTEREST	2
OVERALL	2



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E 64 • COMMODORE 64

Scared by crawlies scuttling round your bathtub...? Now's the time to get your own back on the insect world!

Peter Connor battles five versions of Centipede for the 64

The joy of Centipede is quite simple: murder. As the instructions to the aptly named *Exterminator* say: "Shoot everything that moves and everything that doesn't." Plug in, load up and blast away.

The idea, as any fool knows, is to use your laser beam to destroy the creature of many legs as it comes snaking, or rather centipeding, down to the bottom of the screen. On the way it lugs a protective screen of mushrooms which get in the way of poor murderous fun.

Other opponents encountered in the game include bouncing spiders, very fast snails, garden bugs and, sometimes, lethal birds. Shooting any of these brings a substantial bonus and a lot of satisfaction.

Sound is always an important thread in the rich tapestry which is Centipede. It doesn't really matter what kind of noise it is as long as it's loud and annoys the neighbours.

Exterminator (Bubble Bus, £1.99) fulfils all of these conditions. It has clear, colourful graphics and moves very fast. The sound is suitably loud and unpleasant. The blark tells you to "use the spray gun" (i.e. the laser) to destroy the nasty bugs invading the garden. The actual centipede is a hairy crawler which leaves a trail of bright green and yellow smoke as it descends. Additional structures are a speedy scorpion and a frightening bird which drops bombs your spray gun.

A version of similar quality is Alligator's *Bugblaster* (£7.95). Here the graphics do not have the same sharpness but, in compensation, have a nursery-rhyme charm which only adds to the horror of the proceedings.

The snail, in particular, is a charming creature with his wobbling antennae and pink shell. Charming or not, though, this snail must be blasted.

With a good variety of bugs, snatching centipede segments and slowness sound effects *Bugblaster* delivers the goods.

Cosmic Split (£7.95), unfortunately, is not a good version. Your laser resembles an upturned light-bulb with about 40 Watts of power; it flicks very slowly and makes a very dull noise.

The graphics don't measure up either. A squiggly line masquerades as a snake while the overall effect is one of monotony, as if a rival software house had nacked out all the blood before this program was released.

A step up the evolutionary ladder from Centipede comes Widow's Revenge (Bubble Bus, £3.99). Again, you have to shoot everything that moves and everything that doesn't, but the



Exterminator

tweak is that now your opponents will shoot back if provoked.

Instead of a centipede there are numerous warlike ants marching across and down the screen. If they eat one of the white (wings) eggs, they release a



Bugblaster

deadly photon web which spells your doom.

Zooming around the screen is a flying egg layer. If you hit it you drive it back to the top and give yourself a much needed breathing space.



Widow's Revenge

The widow of the title is a large hairy spider crawling across the screen to provide a juicy bonus.

Although neither graphics nor sound are quite so sharp as in *Exterminator*, *Widow's Revenge* is a more challenging game and great fun to play.

DETronics have a reputation for quality software, so their *Millie-Bug* is, initially at least, a disappointment.

At the first of its nine levels it is

unbearably slow. However, as the high or levels it becomes much faster and more like the Centipede we all know and love.

Graphically the game is very good with lots of different insects. Of special interest is a green tortoise who speeds across the screen inexplicably wearing a top hat.

That, despite a jaunty opening tune, *Millie-Bug*'s sound is far too quiet.

EXTERMINATOR

GRAPHICS	7
SOUND	7
EASE OF USE	7
ORIGINALITY	9
LASTING INTEREST	7
OVERALL	7

BUGBLASTER

GRAPHICS	7
SOUND	8
EASE OF USE	7
ORIGINALITY	9
LASTING INTEREST	8
OVERALL	8

COSMIC SPLIT

GRAPHICS	5
SOUND	5
EASE OF USE	5
ORIGINALITY	7
LASTING INTEREST	4
OVERALL	5

WIDOW'S REVENGE

GRAPHICS	8
SOUND	8
EASE OF USE	7
ORIGINALITY	7
LASTING INTEREST	7
OVERALL	7

MILLIE-BUG

GRAPHICS	7
SOUND	5
EASE OF USE	7
ORIGINALITY	9
LASTING INTEREST	5
OVERALL	6

ODORE 64 • COMMODORE



GAME: QUEST OF THE BRAVE
MACHINE: COMMODORE 64/VC 20
 + 128
JOYSTICK: NO
CATEGORY: ADVENTURE
SUPPLIER: MANTech
PRICE: £7.95

With so many graphic adventures coming on to the market, text-only games

must have something special to offer if they're going to be worth buying. What's special about this one?

For a start, the text is well-written and the locations are carefully thought-out. Add to that a dry sense of humour and you'll soon find yourself forgetting about the lack of graphics and appreciating the almost forgotten powers of your own imagination. More importantly, you don't have to wait for ages while the



GAME: HEROES OF EARN
MACHINE: COMMODORE 64
JOYSTICK: NO
GAME CATEGORY: ADVENTURE
SUPPLIER: INTERFICOR SOFTWARE
PRICE: £7.50

This is an expedient adventure in which you have to amass as much treasure as

possible and rescue the four Heroes of Earn, who, once found, will aid you in your quest.

The program has a large vocabulary and accepts complex commands. 'Attack giant clam with sword' is acceptable and so are instructions delivered to other characters: 'Say to Baron "attack barrowright with tinclaw"' will send Baron into action, though not



GAME: DICTATOR
MACHINE: COMMODORE 64
JOYSTICK: NO
CATEGORY: STRATEGY
SUPPLIER: DYNTRONICS
PRICE: £5.95

An earthquake has just destroyed the neighbouring province of Lehioto, the

Secret Police are planning to assassinate you, and the peasants are revolting. If you've ever fancied playing the bad guy in a banana republic then this is the game for you.

The object of Dictator is simple. Stay in power as long as possible, transfer as much of the public's money as you can to your Swiss bank account, and then escape alive to enjoy it.



GAME: JAWSUN
MACHINE: COMMODORE 64
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: TASKSET
PRICE: £5.95

Jawsun is one of those rare games that should appear in a category all of its

own.

Not only is the idea 100 per cent original, but it involves the best yet use of musical effects.

You control a little man whose task is to collect four musical instruments from the corners of the screen. Each area of the screen has its own colour, and you move from one area to another by hopping on and off conveyor belts.



PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT





ORE 64 • COMMODORE 64

machine draws pictures.

The program has a good vocabulary, but amazingly it will not tell you which words it doesn't understand. This means you have to spend a lot of time trying different commands and wondering exactly which word it is that the machine is objecting to.

Abbreviated commands are accepted, with the inescapable exception of N, S, E, and W, where you have to say "Go N"

rather than just "N" etc.

Whatever its shortcomings, *Quest of Monstera* is an enjoyable adventure. You can quaff ale in the local pub, chat up the barmaid, and investigate some unusual locations as you collect your weapons in preparation for a fight to the death with an angry dragon.

It is one of the better text adventures on the market, and if I have to choose between pretty pictures and exciting

locations I'll choose the excitement every time. **5C**

GRAPHICS	TEXT ONLY
SOUND	TEXT ONLY
EASE OF USE	5
ORIGINALITY	7
LASTING INTEREST	6
OVERALL	6

successfully with the desired effects.

You may also command animals to attack other animals - within reason. Setting a frog on a bear is hardly going to impress the bear and wouldn't do much for the frog, and the program treats such suggestions with appropriate disdain.

Every location has a graphic display and some are accompanied by the best music I've yet heard on the 64.

The only drawback with this game is the amount of time you have to spend trying to find out which words are acceptable. If the program doesn't understand something it apologises politely, but doesn't tell you which word it doesn't understand.

Apart from the anonymous mentioned above, *Heroes of Kato* represents excellent value for money and is

highly recommended. **5C**

GRAPHICS	5
SOUND	8
EASE OF USE	3
ORIGINALITY	6
LASTING INTEREST	7
OVERALL	6

Yes, you guessed it, there's not much difference between being President of Nimble (national anthem 'Yes, We Have No Bananas') and being MP for Puddley-On-The-Marsh.

Your role is measured in months, and each month you are required to take decisions following petitions from one faction or another.

In deciding whether to grant requests

or turn a deaf ear you have access to secret police files (always provided you haven't offended the secret police) and may request additional advice from the all-knowing machine.

Those of you who must have flashy graphics and sound at all costs should avoid this program, likewise those of you who are interested in a serious simulation of running a country. The

rest of us can have a good laugh. **5C**

GRAPHICS	TEXT ONLY
SOUND	TEXT ONLY
EASE OF USE	5
ORIGINALITY	6
LASTING INTEREST	7
OVERALL	6

The conveyor belts are divided into coloured sections, and you can only step onto a section that matches the colour of the area you are standing on.

As you move along the screen the machine beats out some very catchy rhythms, and any time you step onto a conveyor belt it launches into a headless imitation of a 'hot-tickin' jazz-tunk band.

Once you've got your instrument you have to return it to its allotted space in (the centre of) the screen. Musical notes patrol the screen and will attempt to pinch your instrument from you, whereupon you have to start again.

This game is excellently presented with numerous playing options and is for one or two players. Grab yourself an instrument and join the band. **5C**

GRAPHICS	6
SOUND	9
EASE OF USE	10
ORIGINALITY	7
LASTING INTEREST	8
OVERALL	8

• PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT • PCG HIT

GAME: SUPER PIPELINE
MAKING: COMMODORE 64
APPROX: OPTIONAL
CATEGORY: ACTION
SUPPLIER: TASCIT
PRICE: £6.95

Great music. Great graphics. Great game. That's Super Pipeline.

Joe Blingo and his mate are out fixing pipes. You give them a hand by guiding Joe along the pipe, while his mate follows dutifully behind. Oil gushes through the system to end up in a barrel and once that's full you move on to the next section.

Sounds easy? It's not. Lobsters, pipe-bugs, and other verminous scramble up a ladder to the top of the screen and

launch themselves at you with the most vicious intentions, or else drop metal wedges that rupture the pipe and stop the oil from getting through.

Joe and his mate make a great team, though. One carries a spanner, the other a shovel and Wesson 45. While his mate fixes the holes, Joe blasts away at the opposition as they climb up the ladder, or crawl towards him along the pipe.

He can't kill the lobsters, who will drag his mate to oblivion if they catch him, and he has to watch out for falling bugs and metal wedges.

If the pipe gets blocked, you must get Joe to lead his mate to the scene of the crime. The eager young lad then hammers away until the pipe is fixed.

Trouble is, while Joe is busy leading Junior to the break, or flushing him

when he's finished his task, the enemy have seized the opportunity to scramble up the ladder behind his back.

If Junior dies on the job, Joe has to rig back to the beginning of the pipe and pick up another volunteer. Business is good at the job centre, and there is an unlimited supply of plumbin' mates, but you can only take up to eight jobs.

This is one of the best games for the Commodore 64. Don't miss it. **5C**

GRAPHICS	9
SOUND	9
EASE OF USE	7
ORIGINALITY	7
LASTING INTEREST	9
OVERALL	9



ODORE • COMMODORE

GAME: EIGHT

MACHINE: COMMODORE 64
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: GAMES MACHINE
PRICE: £7.95

There are some games which are simple but challenging. Others are simple and addictive. *Eight* is just plain simple.

The screen divides into three columns. Aliens of various shapes rush up and down the two outside lanes, making it very difficult for poor *Eight* (that's you) to leave the middle lane without



getting eaten alive. The idea of the game is to cross the fast lanes and make contact with little red buttons as they appear on the sides of the screen.

GRAPHICS	3
SOUND	3
EASE OF USE	4
ORIGINALITY	6
LASTING INTEREST	3
OVERALL	3

There is one complication. *Eight* is holding an egg which he is not allowed to take with him on his travels.

He therefore has to climb to the top of the screen, release the egg and then return to the centre lane in time to catch the egg before it hits the floor. **SC**

GAME: R-NEST

MACHINE: COMMODORE 64
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: AUDIOGRAPHIC
PRICE: £6.95

What's in a name? *R-Nest* is a pseudonym for *Q-Sort*, the game in which you have to paint the cubes on a 3D pyramid while avoiding hungry monsters. It's a rather good version with some individual features.

R-Nest himself is a cute little figure with an alarmingly big nose who hops



around metaphorically trying to do his job. His main opponent is Gargol the snake, accurately described in the blurb

GRAPHICS	7
SOUND	3
EASE OF USE	3
ORIGINALITY	6
LASTING INTEREST	6
OVERALL	6

as looking like 'a mutant leoprog'. **PC**

R-Nest's graphics are colourful, but do have that slight busyness which Commodore 64 owners will be familiar with. Sound is a little weak, but this is a game where it shouldn't matter too much.

GAME: ZAPPY ZOOKS

MACHINE: COMMODORE 64
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: SCORP
PRICE: £6.95

If you don't know what you're doing in *Zappy Zooks* (which provide this helpful tip: 'The object of the game is to get the highest score.' Well, just fancy that).

The game itself is no more original than its subject, it is yet another version of *Pacman*. The monsters in this case



are the *Zooks* of the title.

The player's man is Whorly, who, as his name suggests, whirrs around trying

GRAPHICS	3
SOUND	4
EASE OF USE	4
ORIGINALITY	4
LASTING INTEREST	3
OVERALL	3

to eat the dots in the maze.

Despite having several levels, *Zappy Zooks* never gets fast enough to be really engaging. The graphics are no more than adequate and the sound is a complete waste of the Commodore's great potential. **SC**

GAME: Moby DICK

MACHINE: COMMODORE 64
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: P.D.S.
PRICE: £7.95

Few computer games have a moral, but *Moby Dick* carries a message that will warm the cockles of any conservationist's heart: killing whales is wrong.

Of course, since this is a computer game killing just about everything else is fine. The idea in *Moby Dick* is to depth charge submarines from the destroyer you are skipping at the same time as



trying to down a pink helicopter with your missiles.

Should you hit the white-tailed plane will fall out, you need try to save

GRAPHICS	6
SOUND	6
EASE OF USE	7
ORIGINALITY	6
LASTING INTEREST	6
OVERALL	6

him before he goes to a watery grave.

As you zoom across the deep blue sea, it is pretty easy to get the odds with your depth charges. It's also easy to turn the great white whale, *Moby Dick*, into so-much-car-flesh. But while this would've pleased Captain Ahab no end, it's big trouble for you. **PC**

• ORIC • SPECTRUM • ORIC

GAME: LOCH NESS MONSTERS
MACHINE: ORIC 48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: ROMK
PRICE: £6.99

Och aye. 'Tis a terrible story: one fit to tickle the spurs of many an Oric owner. Did ye not know that over the

centuries Nessie has evolved into a vicious man-eating beastie?

Not only that but there's more than one of them and an unacceptably small number of tourists are being eaten.

In this game your job is to keep the number of Nessies down to a reasonable level, that how do you kill a Loch Ness Monster? Apparently you can harpoon them like whales or drop a poisoned fish on them.

The screen displays a map of the loch

with areas of shoal, water and vegetation. Also displayed are many fish, some named (some poisoned). The player sets off in his wee boat in search of his monstrous quarry.

Eliminating them is no easy business. With the harpoon you must hit them head on, otherwise they merely fragment and cause you even more problems. A more efficient method is to get them to eat poisoned fish. Unfortunately, you must pass over 25 ordinary

GAME: DEFENCE FORCE
MACHINE: ORIC 48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: MANSOFT
PRICE: £7.99

Life's tough out in the further reaches of the star system Sol. Vulturne and Kidnap-

ping the few remaining humans, how can they survive? Only by a display of great skill and courage from the pilot of Defender Force.

If he has the right stuff he might be able to save the humans before their grisly fate is sealed.

It won't be easy, though, because this version of Defender is pretty nifty. Quick reactions and nerves of steel are needed - and that's just for loading.

After that all hell breaks loose as the various aliens start whizzing around.

For those of us with nerves of putty rather than steel, Mansoft have thoughtfully provided a beginner's version which gives you a gentle foretaste of the horrors to come. Here you can take a good long look at the alien adversaries.

There are 16 different alien forms to contend with. The aforementioned Vulturne must be blasted before they get to

GAME: HOUSE OF DEATH
MACHINE: ORIC
JOYSTICK: NO
CATEGORY: ADVENTURE
SUPPLIER: MANSOFT
PRICE: £7.99

Mansoft are not exactly modest when it comes to describing *House of Death*. It

is a 'totally original adventure' and has a large vocabulary because 'it's not one of those cheapo games'. Well, at £9.99 I agree it's not 'cheapo', but is it any good?

To start with it isn't quite as original as you might have been led to believe. It is a standard text-based adventure that accepts abbreviated commands as you explore an abandoned film-studio build-

ing for treasure.

The building is haunted by various ghosts and brats whom you should avoid at all costs (with one or two exceptions). The only special features are a larger-than-average vocabulary, a time limit, and the occasional sound effect.

In its attempts to prove that it isn't a 'cheapo' game the program sometimes

GAME: HURICANES 2
MACHINE: ORIC 48K
JOYSTICK: NO
CATEGORY: COMBINATION
SUPPLIER: MANSOFT
PRICE: £6.99

The Mark tells you that this tape contains 'five challenging games' for the

Oric. Well, I'm not at all sure about that 'challenging' but it certainly does contain five games.

When you've carried out the truly challenging business of loading the program on to your Oric you are confronted with Sabo. This is a game with challengingly awful graphics; your ship could be anything, as could the submarines you try to depth-charge. The

sea, though, is a pleasant blue.

SD Link is a version of three-dimensional thoughts and crosses. The graphics are a great improvement on Sabo, giving you clear clear shots of boards. You can play the computer, play another human or let the computer play itself. Unless you are as subtly logical as Mr Speech you might well prefer the last option.

GAME: SPACE STATION ZELVA
MACHINE: SPECTRUM 48K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: SYNDRO
PRICE: £6.99

Space Station Zelva lies at the furthest outpost of the galaxy. Long may it stay there. A fast-paced and tedious shoot-'em-up game with great graphics but not much else to offer. **BC**

GAME: ROBOT REX
MACHINE: SPECTRUM 48K
JOYSTICK: EMUPSTON OPTIONAL
CATEGORY: ARCADE
SUPPLIER: SILVERSOFT
PRICE: £3.99

Pat-Man variant in which you lay down bombs in a maze while being chased by robots. Perfectly good fun - unless you already have one of the other 2 million *Pat-Man* for the Spectrum. **CA**

GAME: PARADOX
MACHINE: SPECTRUM 48K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: MICRO-GEM
PRICE: £6.99

A different kind of shoot-'em-up - but not very interesting. You move up and down the centre of the screen, firing left and right to protect your nuclear reactor from parachuting aliens. **CA**

GRAPHICS	6
SOUND	6
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	2
OVERALL	3

GRAPHICS	4
SOUND	4
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	2
OVERALL	3

GRAPHICS	4
SOUND	5
EASE OF USE	3
ORIGINALITY	6
LASTING INTEREST	2
OVERALL	3

ORIC • SPECTRUM • ORIC



fish before being awarded a poisoned one.

The graphics in this game are not fantastic, but then what Oric game does since you graphically? The mountains are long squiggly lines and the different areas of water, land and wood are clearly distinguishable.

The sound, though, is quite good. The opening tune is that old favourite about taking someone to the bonny, bonny banks of - naturally - Loch Lomond.

The boat makes a good chugging noise and a clever blocked sound when stuck in the weeds.

PC

GRAPHICS	5
SOUND	7
EASE OF USE	7
ORIGINALITY	7
LASTING INTEREST	6
OVERALL	7

your humanoid, Poole, as any *Defender* veteran knows, are particularly troublesome; they keep exploding into swarms of Monsters which attack you in a worryingly erratic way. Others have their own little surprises in store.

Your ship is very manoeuvrable and firing is rapid enough to give at least a chance of survival. *Defender Force's* graphics are impressive for an Oric game and the sound is truly deafening; if

it's too much for you there is a silent-game option.

PC

GRAPHICS	7
SOUND	7
EASE OF USE	7
ORIGINALITY	8
LASTING INTEREST	6
OVERALL	7

overreaches itself, announcing 'You've won!' with 'Oh, you've beaten me now!' rather than admitting that it doesn't understand you.

Later it told me that it assumed I would be winning whatever I possessed, which meant I was wandering around winning a mattress.

Beast of Death is a tough nut to crack, and novices are advised to steer

clear.

SC

GRAPHICS	TEXT ONLY
SOUND	3
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	5
OVERALL	3

Third on the menu is... *Marginalia*? You play the computer which dimes out the figure as you get letters wrong. The graphics are again very poor. The first word you are faced with has three letters.

The remaining games on this dull compendium are *Dead Race* and *Microlander*.

PC

Graphics	3
SOUND	3
EASE OF USE	4
ORIGINALITY	3
LASTING INTEREST	3
OVERALL	3

GAME: VOLCANIC PLANET
MACHINE: SPECTRUM, ORIC
JOYSTICK: OPTIONAL
CATEGORIES: ARCADE
SUPPLIER: NAI
PRICE:

Ever won a robot game (the *Jetters*)? *Volcanic Planet* is android-indexed and boy, do they get panicky when you blast them into little bits and send them to that Great Workshop in the sky.

You control a good-guy android as he explores a multi-level maze, moving between levels via lifts that you locate using a small-scale diagram in the top right-hand corner of the screen.

The main display shows your location and features scrolling graphics as you move about blasting enemy androids and hunting for such useful things as

oxygen supplies and armour repair packs.

There are five levels of play, and the higher the level the more layers there are to be penetrated.

Once you've reached the bottom of the maze you have to find a 'volcanic plug' and deposit a plasma-bomb beside it. Then it's a race against time to find the lift and escape before the bomb explodes and floods the maze with molten lava.

The program has no sound, and uses the number keys '3' to '7' which makes things a bit cramped if you don't have a joystick.

The only reward for success is the message 'Mission Completed!' that flashes across the screen at the end. The action is fast and smooth however and should afford a few hours amusement.

The program doesn't have a recommended retail price so it may be worth



shopping around for the best offer.

SC

GRAPHICS	5
SOUND	NONE
EASE OF USE	5
ORIGINALITY	5
LASTING INTEREST	7
OVERALL	7

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GAME: ANDROID TWO
MACHINE: SPECTRUM 48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: VORTEX
PRICE: £5.95

Android One was a competent but unimpaired variant of Benark, Android Two is something quite different.



GAME: URBAN UPSTART
MACHINE: SPECTRUM 48K
JOYSTICK: NO
CATEGORY: ADVENTURE
SUPPLIER: RICHARD SHEPHERD
PRICE: £5.50

Urban Upstart is the latest creation of

You control an android as he steps out of his transporter capsule into a three-dimensional maze of vast proportions. Only a part of the maze is visible at any one time and if you move to the edge of the screen the display scrolls appropriately, bringing a new sector into view.

There is a very comprehensive status display, featuring score, hi-score, time elapsed, targets destroyed, lives remaining, and an attractive but (in practice)

programmer Peter Cooke, who was responsible for some of the earlier Richard Shepherd offerings.

Like Incredible Island, Urban Upstart features split-screen graphics, over 70 locations, and some very dry humour. It's not an easy adventure to solve and is good for a few evenings' light entertainment.

At the start of the game you find yourself in a small house in Scarborough,



GAME: LASER SNAKER
MACHINE: SPECTRUM 48K
JOYSTICK: RECOMMEND
CATEGORY: ARCADE
SUPPLIER: POINTSOFF
PRICE: £5.95

You're the snake in *Laser Snaker* and your mission is to penetrate egg planta-

tions. The eggs are multicoloured and spread randomly about a succession of screens, here called sheets.

You start as just the snake's head and by swallowing eggs you grow a section at a time.

In the long run, it's better to eat the eggs with your head than eat them, because it's always possible to bump in your own tail when it gets long enough, resulting in the loss of one of those lives.



GAME: APPLE IAN
MACHINE: SPECTRUM 16/48K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: DETRONICS
PRICE: £3.95

This one is guaranteed to make you sick. Apples are falling off the end of a

conveyor belt and jam is dripping from the nozzle of a machine. It's your disgusting duty to stand under each piece of apparatus in turn so that as much food as possible falls into your mouth.

With each gulp you grow visibly fatter until — the rich part — you have a fit. This costs you a pill, and since you have only three you need to keep slimming down by running into a scene.



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Using the L, Q, S, and P keys you must avoid landmines, flowers, and flower-bombs as you sweep the mines for the elusive Milliboids. There are five of these caterpillar-like beasts, and each may be destroyed by three well-aimed blasts from your laser.

This weapon is of limited range but can be conveniently fired using any of the bottom four feet.

You have the books and have read

these every time you bump into some-
thing nasty, which in this game means
almost everything.

If you succeed in finding and destroying all five Millennoids in the allotted time you may then be transported to the next zone - always provided that you manage to find your way back to the transporter capsule. There are three zones, each with a different scenario.

Android Java is excellently documented with no less than five

screen of instructions, which you can skip if you want to. The 3D effects and graphics are also very well produced. It's

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THE MONTH • GAME OF THE MONTH

GAME: SCUBA DIVE
MAKERS: SPIC TRON, INC.
JOYSTICKS: SINGLE OR OPTIONAL
CATEGORY: ARCADE
SUPPLIER: CURE!!
PRICE: \$3.50

The time has come, game player, to stop your compulsive jacking of fire buttons, slip out of your over-used space capsule and carefully, very carefully enter this fabulous underwater world.

Imagine a vast ocean bed hiding monstrous wealth; dark waters inhabited by sharks, squid, barracuda, electric eels, giant clams, killer jellyfish and hungry schools of fish; a guarded passage which leads to endless caverns of frightening complexity. Begin your Scuba Dive. But be on your guard.

Believe it or not, this program will take you on an adventure in which you will not shoot anything, nor experience any particularly fast action. Yet you will be totally absorbed. And even if your first attempts result in early death (they will), you won't hesitate to re-enter the water.

Let's start at the beginning. On screen is a boat floating in shallow waters. At the touch of a key, the diver goes over the side. Making him swim is simple. Two keys to accelerate and slow down; two more to rotate him so that he heads in the right direction.

Kicking his legs gently, the diver moves towards the sea-bed. As he nears

the bottom of the screen, the picture changes to reveal what's below. For at any one moment only a small fragment of the underwater terrain can be depicted on screen.

The diver is looking for treasure. And scattered on the sea-bed are objects which open and shut. If he can touch them when they're open he can pick up the pearls they conceal.

But it's a delicate operation. If he's not careful he will crash into the rock, knock himself unconscious and drop all the treasure he's collected.

To be safe, the treasure must be returned to the boat. But when the diver returns to the surface he finds the boat has drifted and is nowhere to be seen. He may have a long swim to find it - and his oxygen level is falling all the time.

There are far greater hazards ahead, for the waters are teeming with life, and meeting any of it is fatal.

From the safe position of an armchair, the creatures are wonderful to behold. There are more than 18 different types and they're incredibly life-like. They swim smoothly across the screen, and then suddenly turn round in beautiful 3D-effect.

The sharks and squid in particular are frighteningly real.

Once the diver has found all the ocean pearls he has a more dangerous mission to complete. In one location on the ocean bed is an octopus guarding the entrance to a deeper cavern. As the octopus moves his tentacles up and

down, it's possible to slip past him. The cavern contains more creatures, including giant clams which hide even greater treasure.

But the game's real challenge lies in the final mission which involves going past a second octopus into the really deep waters. Here there are numerous narrow passages through the rock and they're different every time you play.

If you can find the right ones and swim through them safely, you will come across three treasure chests.

Each of these contains more than you can carry, so to empty them you will have to make several trips, going right back up to the boat each time.

You'll also need to keep ensuring your oxygen supply from canisters you may (or may not) find hidden in the passages. (Yes it is, it'll be a miracle if you get back alive.)

Many computer games demand little more than fast reactions and finger co-ordination. You get a short burst of high-adrenaline action - and then you're done.

Scuba Dive is different. Instead of having 101 things haunting at you which you must shoot or avoid, you have a much longer and ultimately more challenging quest.

Rather than scoring every time you do something successfully, you only get points when treasure is returned to the boat. This greatly adds to the game's competitiveness - and frustration!

It means you can adopt one of several



Your underwater quest starts in the boat (1). The diver is the sea-bed in search of them (2). Then you pass the octopus (3) to reach the deep passages. You might discover oxygen tanks (4) or even a treasure chest (5).

The BBC Micro can now give your children a private education.

The BBC Microcomputer now accounts for 80% of the computers being ordered under the current DOL Primary School Scheme.

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One of the reasons for its success is that it makes learning highly entertaining for everybody. From children who are getting to grips with the alphabet, to adults who want a gentle but intensive introduction to the complex world of computing.

Now, there's a substantial new catalogue of educational programs specially for the BBC Microcomputer.

It has been developed by Acornsoft, the software division of Acorn Computers who manufacture the BBC Micro.

Making faces without getting scratched.

With the new Facemaker program, your children can make over a million faces. It's like an Ident-Kit, allowing them to depict anyone they want. They start by choosing the eyes. Then they can choose the mouth, the ears, the nose, the facial outline and the hairstyle.

And if they really fancy dressing up, they can add earrings and hats.

In doing all this, they learn to read and spell, as well as developing their powers of description.

The money programs, two games for the price of one.

Mr T is an engaging little figure of the microchip who can teach your children all the complexities of our coinage system.

His Money Box program has two games, each of which can be played at different levels.

In Money Match, the challenge is to collect a set of coins, matching them according to shape, size and value.

In Money Box, you can give your child and Mr T a helping hand to get all the coins on the screen into the box. (It's always different, because the coins on the screen are based on the small change you have to hand.)

A chance to teach the Micro a thing or two.

With the Animal, Vegetable, Mineral program, the children can get the computer guessing.

They think of an object. The BBC Micro has to decide what it is.

If it doesn't come up with the answer, the children can keep giving it hints.

In doing so, they are encouraged to question the difference between such things as crocodiles and alligators, or whether oil is vegetable or mineral.

The program also encourages them to consult refer-



ence books so that they can ask the computer increasingly tough questions.

Questions on Julius Caesar from J. Julius Norwiche.

John Julius Norwiche's History Quiz is one of the new BBC Micro Grandmaster quiz series which also covers theatre, crime and detection, music, science fiction and royalty.

On the history front, there are 300 brain-testing questions, covering all aspects of British history from Julius Caesar to Margaret Thatcher.

And to increase the educational value, Mr Norwiche has posed the questions from angles which will give a broader understanding of events.

For the full catalogue, clip the coupon.

There are thirty more new BBC Micro programs in Acornsoft's new catalogue.

For a free copy, complete the coupon, or telephone 0933-79340. Or ask your local BBC Micro dealer.

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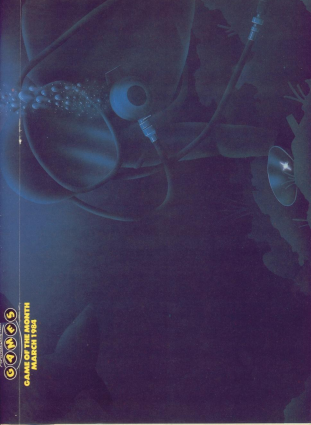
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different strategies, for example returning to the surface regularly, or collecting as much treasure as you can carry (with the risk of losing it all).

The program avoids a fault of many games which make you go through the same early stages every time you play. In *Scuba Dive* you can head straight for the deep passages if you so wish, and save the easier points for later.

Other nice features are four different skill levels, user-definable keys and the ability to save the high score table on tape, making the game suitable for ongoing club competitions.

What's more, the cassette includes an instruction booklet offering fuller directions than usual.

Scuba Dive isn't perfect. As in many Spectrum games the sound is limited. And it would have been nicer to have the screen scrolling smoothly when changing locations instead of simply cutting to the new position.

Despite these quibbles, the game is incredibly addictive. So if you fancy sitting back for a long nail-biting adventure, you'll find *Scuba Dive* is very, very special.

C.A.

GRAPHICS	10
SOUND	3
EASE OF USE	8
ORIGINALITY	9
LASTING INTEREST	10
OVERALL	9



Mike Richardson - worked nine to five on *Scuba Dive* and created an underwater masterpiece without getting his feet wet

A GENIUS ON THE QUIET

You'd think that the writer of a sound-tracking underwater adventure like *Scuba Dive* would himself be a bit clever with a pair of flippers. Not Mike Richardson.

"I can't swim," he admitted. "In fact I don't like water." So those brilliant moving pictures of the ocean creatures weren't based on first hand experience? "No. I copied them from a book."

Swimmer or not, there's no doubt that Mike Richardson can program. The managing director of Durell Software Robert White describes him as "a genius on the quiet".

"He just sits there very quietly in the office. He only programs, nothing else. He won't say anything, he won't have any coffee or eat or anything. About three o'clock you can give him a little water by intravenous drip."

Maybe it's because he doesn't like sitting at desks. "When I'm at home, I just slouch in a chair and write on scraps of paper," said Mike. "I don't do anything else. This is my hobby."

Whatever the technique, it seems to work. *Scuba Dive* contains some extremely sophisticated routines - the huge underwater passages, for example,

are generated differently each time the game is played. When running it says the entire ARK available.

The program took three months to write. "I was working on it at the office from nine to five each day. I wanted to get the program as realistic as possible."

The work's very absorbing. But I don't like doing the actual coding."

Certainly Mike doesn't fit easily into the role of computer whizz-kid. For a start, he's 26 and a former chemist. He doesn't drive around in a sparkling Mercedes. In fact, until a few weeks ago, he was the proud owner of a 3-wheeler Robin Reliant with a door hanging off - but that's now been replaced by a Ford Fiesta.

He's been working for Taunton-based Durell for the past six months, and is the writer of both their previous main successes - *Harrier Attack* and *Jungle Trouble*.

In fact the company itself has seen remarkable growth. Sales of cassettes have risen from 800 last July to 20,000 in December.

At that rate it won't be long before that Fiesta gets upgraded.



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CTRUM • SPECTRUM • SP

GAME: JAMBY
MACHINE: SPECTRUM 486
JOYSTICK: OPTIONAL
CATEGORY: PUZZLE
SUPPLIER: ELECTRONICS
PRICE: £6.95

Remember those flat plastic puzzles in which you had to slide squares around until they were in the right order? Now

you can do the same thing on a computer.

Jamby is a very nice version of the puzzle with the added twist that some of the 10 pictures you have to unscramble are continuously scrolling. This means that in their scrambled-up state it's extremely difficult to work out which piece goes where.

Another addition is that you have a target number of moves to solve the puzzle in (initially 150). If you make the

target you're supplied with a code which allows you to move on to the next picture.

If you don't make it, you scratch your teeth and try again. I'm not quite a few layers of Jamby will do a good deal of tooth-grubbing. For if you hold down a key a fraction of a second too long, you will end up sliding two squares instead of one. You only have to do this a few times to blow any chance of reaching your target.

GAME: RIVER RESCUE
MACHINE: SPECTRUM 486
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: THORN EMI
PRICE: £4.95

Break out the binoculars, lads, and turn the boat upstream — there's people to

rescue!

The river scrolls from right to left and contains logs and crocodiles, which can sink any of your five boats, as can the treacherous riverbanks. You can shoot the crocs or you can avoid them by moving up or down. The riverbanks are fairly straight but do occasionally and unfortunately jut out into the water.

Red wheels pop up either side and turning into the north one, means a

passenger is picked up. They always appear on the north, and will only disembark on the south, leaving you wondering why someone didn't just build a bridge.

Points are gained for distance of river covered, crocodiles shot and people rescued. Rescue nine passengers and you'll be awarded an extra boat. If you get far enough, you'll also find biplanes dropping mines into the water.

GAME: MAGIC MENAGER
MACHINE: SPECTRUM 128
JOYSTICK: KEMPSTON
CATEGORY: ARCADE
SUPPLIER: CCG MICRO SYSTEMS
PRICE: £5.95

The wizard on the cover of Magic Menagerie looks as if he belongs to an

adventure game. In fact, he's got another graduate of the Per-Plan Horvath academy, in yet another variation of the maze game.

As Magic the Wizard you're on a screen liberally sprinkled with lead, which you must collect, and Monies, which you must avoid. A do-it-yourself maze emerges as your passage cuts a path through the brilliant green screen, and along each path the Monies

wander.

The object is to collect all the lead and a roaming band of cherries. Apples are embedded in the screen, and will fall vertically down any paths cut. By passing beneath an apple with a Monie on your tail, you can knock his path as the apple drops down.

Another way of dealing with Monies is to zap them with crystal balls, which are floated ingenuitously, rather than

GAME: I'M IN SHOCK
MACHINE: SPECTRUM 128/640K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: ARIC
PRICE: £4.95

Your suspicions about this program are first aroused when you discover that it

loads in well under a minute. They're confirmed when you start playing. It's junk.

According to the driest of the cassette label you're supposed to be a battlefield shooting up alien ships in a battlefield constructed by the enemy.

What actually appears on screen is a grid speckled with a few coloured blinks, one of which is you, the rest the enemy.

You can move right or left (not up as the instructions tell you) and fire. The game's only hint of novelty is that the "zaps" from your gun bounce off shields placed at angles on the grid.

This means you can destroy aliens which aren't directly above you — while they can't destroy you because their shots don't bounce. Strange way to build a defensive battlefield.

PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★

GAME: FIGHTER PILOT
MACHINE: SPECTRUM 486
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: DIGITAL INTEGRATION
PRICE: £7.95

You can't beat an F15 Eagle jet fighter for sheer power and speed, and now you don't need to join the US Air Force to know why. All you need is a Spectrum and Fighter Pilot.

Flight simulation programs put you right in the pilot's seat. They confront you with a screen split horizontally between instrumentation and your view from the cockpit.

Instrumentation involves things like velocity, altitude, fuel etc, and Fighter Pilot's is thorough. You'll need to spend quite a while working through the instructions, but once in control it's great fun.

Thus far, the program offers nothing unique, although with a joystick the flying is the best I've come across. Fighter Pilot offers the extra options of combat practice or combat itself. Since it's only a program, you may as well go for the actual combat. Instruments lock into the range, bearing and altitude of an enemy plane that's out to bomb four airfields, all on your map-display.

From scrambling at take-off to getting the enemy in your sights is hard enough, but shooting him from the sky takes

skill. The dogfight is realistic, thrilling and calls for a cool head.

Inevitably, comparisons with Plan's Fight Simulator program will be made. Fighter Pilot has the edge over its civilian game straightaway for its spectacular combat, but it wins too on graphics and instrumentation. **WD**

GRAPHICS	B
SOUND	WOMB
EASE OF USE	B
ORIGINALITY	B
LASTING INTEREST	B
OVERALL	10



SPECTRUM • SPECTRUM

Fortunately you do have the option of peering at the unscrambled picture you're aiming for. And of stopping the scrolling – although this stops you getting the code when you solve the puzzle.

Anyone who does manage to get through all 10 puzzles will win the right to design a picture for *Family AT*.

But although *Family AT* is novel, colourful and slick, at heart it remains a simple puzzle which is made frustrating in a rather artificial way. A bit like asking

someone to count to 10 while holding his head submerged in a bucket of glue.

CA

GRAPHICS	9
SOUND	5
EASE OF USE	4
ORIGINALITY	9
LASTING INTEREST	6
OVERALL	7

After Racine was previously available for the Vic, Atari and T199, but with dolphins rather than crocodiles. Shooting dolphins has evidently been seen as unethical.

It's a shame there's only one speed of play, if you want to go faster, all that happens is the boat moves to the right of the screen, giving less warning of what's coming. As for sound effects, the boat engine sounds authentic, but the loss of

about renders an irritating raspberry.

MD

GRAPHICS	8
SOUND	8
EASE OF USE	7
ORIGINALITY	6
LASTING INTEREST	6
OVERALL	6

lived, in the direction of motion.

The game has nine skill levels, each faster, and a succession of screens, all fairly similar but with successively more monsters. If you don't have a Kensington joystick, a commercial choice of keyboard keys has been made, and all the action happens to the accompaniment of the car's own dance music.

Clearly, this engaging music is entirely irrelevant to the concept of the game, as

is the music (jumbo about) wizards, but it's not a bad thing that results.

WD

GRAPHICS	5
SOUND	8
EASE OF USE	8
ORIGINALITY	8
LASTING INTEREST	7
OVERALL	7

The game is pathetically easy to master and is unlikely to sustain interest for more than a few minutes.

Although the motion is smooth, all the moving objects are the size of single characters, and there's no attempt at animation.

The game's title, incidentally, bears no relation to what happens – it must be a reference to the reaction of people who

actually buy this rubbish.

CA

GRAPHICS	2
SOUND	2
EASE OF USE	6
ORIGINALITY	3
LASTING INTEREST	0
OVERALL	1

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GAME: SNEER PANIC
MACHINE: SPECTRUM 16/48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: VISIONS
PRICE: £3.95

Sneer Panic is an old favourite in the arcade, but there are many more adventurous games now available for the Spectrum. However, if you are dead at an adding a version of this game to your collection then Visions's *Sneer Panic* is fine.

For those of you unfamiliar with the game, you control a figure armed with a



shovel, whose task is to climb ladders and dig holes for careless monsters to fall into. You then rush up and bury them before they have a chance to

GRAPHICS	3
SOUND	4
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	3
OVERALL	4

clamber out.

Visions's monsters are intelligent, the action fast and smooth, and high scores are difficult to get.

Sneer Panic holds no surprises. The graphics are acceptable, and the sound is what we have come to expect from the Spectrum, which isn't much. **BC**

GAME: MICRO MOUSE GOES
 DE-BLOCKING
MACHINE: SPECTRUM 48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: LOTHORSEN
PRICE: £3.95

A computer game on a computer theme. On screen is a Basic program with some of its letters and numbers missing. They've been stolen by little bugs who hid them in boxes at the corners of the screen.

You control a mouse whose job is to get them back into position. This is



easier than it sounds because the screen shows you where each missing character should be, and even tells you which box to collect it from. The problem is

GRAPHICS	3
SOUND	4
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	4
OVERALL	3

purely to replace the letters faster than the bugs can steal them.

This is easy at first, but gets progressively harder. You may have to resort to destroying the bugs with a spray you can repair at them - although it's hard to see what this achieves, since they're immediately replaced. **CA**

GAME: 3D DEFENDA
MACHINE: SPECTRUM 48K
JOYSTICK: ADP-OPTIONAL
CATEGORY: ARCADE
SUPPLIER: CONTRAST
PRICE: £4.95

This game has nothing to do with the usual classic Defender. Here's the gist. It's a simple shoot-the-alien affair, the only point of interest being the 3D view of the action.

At first sight it looks quite good. The planet you're flying over scrolls beneath you like the film of a moving car, and the enemy craft look larger and larger as



they get closer.

But in actual playability the game falls down. As is usual with 3D games, you aim by moving a joystick right to the

GRAPHICS	4
SOUND	3
EASE OF USE	1
ORIGINALITY	3
LASTING INTEREST	2
OVERALL	3

spot you want to hit.

But in this version the sight jerks along sluggishly and there's an annoying delay between pressing the fire button and the actual shot. And your motion is interrupted every time the approaching craft opens fire, which is poor programming. **CA**

GAME: STARCLASH
MACHINE: SPECTRUM 16/48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: MICROFQA
PRICE: £6.95

How's this for an original idea? You control a spaceship and have to shoot your way through waves of alien craft!

Yes, it's got another space shoot out to offer. There are four different waves of alien, but their movement is more or less identical.



What's worse is that in each wave, the attackers move in formation - no Galaxian type wheeling and weaving. If one

GRAPHICS	4
SOUND	3
EASE OF USE	3
ORIGINALITY	1
LASTING INTEREST	2
OVERALL	2

must do battle in space, it should at least be interesting.

After getting through the alien you have to take pot luck at shooting down a narrow 'reactor core' to destroy a 'mother ship'. Then you have the 'thrill' of starting all over again. **CA**



GAME: WHIZZER
MACHINE: SPECTRUM 48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: MICROSOFT
PRICE: £5.95

Guide your bike through a large, scrolling maze, jumping over cars and buses and avoiding monsters. The skill lies in

getting your speed right, and picking the most suitable route. It's fun and it'll keep you interested. **CA**

GRAPHICS	5
SOUND	4
EASE OF USE	3
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	7



GAME: STAR WARS
MACHINE: SPECTRUM 128K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: VISIONS
PRICE: £5.95

Space game with three different plots of action, straightforward shoot-'em-up,

an asteroid storm, and a maze from which you must collect a crystal. **CA**

GRAPHICS	3
SOUND	4
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	3
OVERALL	4



GAME: BUBBLE TROUBLE
MACHINE: SPECTRUM 48K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: ARCADE
PRICE: £5.50

A type of Pac-Man in which you collect treasure from a maze and avoid bubbles. Only novelty is that you can prize a key

to reverse direction of bubbles when consumed. But 50 screens offered. **CA**

GRAPHICS	4
SOUND	3
EASE OF USE	3
ORIGINALITY	1
LASTING INTEREST	4
OVERALL	4



GAME: DOOM BUGS
MACHINE: SPECTRUM 128K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: WORK FORCE
PRICE: £5.50

You must try to break through a trap-door while gobbling up eggs and Grubbers in a hopeless attempt at preventing

them turning into lethal red-backed Grubbers. **CA**

GRAPHICS	5
SOUND	4
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	3
OVERALL	3



GAME: RIMAN SEVEN
MACHINE: SPECTRUM 48K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: VISIONS
PRICE: £5.95

The setting is a South African mine - you have to reach the surface, avoiding boulders and gas clouds by dashing

down ladders or jumping on to beams. **CA**

GRAPHICS	3
SOUND	3
EASE OF USE	3
ORIGINALITY	5
LASTING INTEREST	4
OVERALL	3



GAME: SAM SPACE
MACHINE: SPECTRUM 128K
JOYSTICK: COMPETITION OPTIONAL
CATEGORY: ARCADE
SUPPLIER: SILVERSOFT
PRICE: £5.95

You knock holes in the scaffolding and then harness the monsters that fall in. But the green and yellow monsters have

to be knocked through more than one layer. Addictive. **CA**

GRAPHICS	3
SOUND	3
EASE OF USE	3
ORIGINALITY	3
LASTING INTEREST	7
OVERALL	5

SPECTRUM • SPECTRUM



GAME: ASTROPLANE
MACHINE: SPECTRUM 48K
JOYSTICK: KEMPSTON (OPTIONAL)
CATEGORY: ARCADE
SUPPLIER: ROMK
PRICE: £5.99

A Defender-type game with scrolling landscapes. You have to transport mutants to a factory while avoiding four types of aliens.

Hard to play and not particularly exciting. The graphics could have been a lot more colourful. **CA**

GRAPHICS	4
SOUND	4
EASE OF USE	2
ORIGINALITY	2
LASTING INTEREST	4
OVERALL	4



GAME: BARDES
MACHINE: SPECTRUM 16/48K
JOYSTICK: KEMPSTON (OPTIONAL)
CATEGORY: ARCADE
SUPPLIER: VISIONS
PRICE: £5.95

Average version of Castipede - clear if unambitious graphics a choice of game

speeds, and a nice fat spider which is easy to hit. **CA**

GRAPHICS	4
SOUND	4
EASE OF USE	3
ORIGINALITY	1
LASTING INTEREST	3
OVERALL	3



GAME: CREEPY CRAWLER
MACHINE: SPECTRUM 16/48K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: MICRO-GEN
PRICE: £5.95

Yet another Castipede, a game which is always pretty hopeless on the Spectrum. This one has adequate (but boring)

graphics, adequate (but boring) sound. Not a good buy. **CA**

GRAPHICS	2
SOUND	2
EASE OF USE	3
ORIGINALITY	1
LASTING INTEREST	2
OVERALL	2



GAME: FREEZEBES
MACHINE: SPECTRUM 48K
JOYSTICK: KEMPSTON (OPTIONAL)
CATEGORY: ARCADE
SUPPLIER: SILVERSOFT
PRICE: £5.95

Nice version of the game Freeze - kill the snow men by sliding ice blocks on to them or use thermal electric force.

Fast and furious action. **CA**

GRAPHICS	3
SOUND	4
EASE OF USE	3
ORIGINALITY	1
LASTING INTEREST	6
OVERALL	3



GAME: ARMAGEDDON
MACHINE: SPECTRUM 16/48K
JOYSTICK: NO
CATEGORY: ARCADE
SUPPLIER: SILVERSOFT
PRICE: £5.95

A very nice translation of Missile Command. Fast, colourful and with extra stacking weapons which can only be

destroyed by direct hits. Great fun, if you like saving the earth. **CA**

GRAPHICS	3
SOUND	3
EASE OF USE	3
ORIGINALITY	2
LASTING INTEREST	7
OVERALL	4



GAME: DE-FUSION
MACHINE: SPECTRUM 48K
JOYSTICK: KEMPSTON (OPTIONAL)
CATEGORY: ARCADE
SUPPLIER: HYPERMUSE LTD
PRICE: £5.95

Get points by reaching (and defusing) bombs without being caught by, yes, a bomb bot. The skill is to choose the

right route, because your stepping stones disappear after being used. **CA**

GRAPHICS	3
SOUND	2
EASE OF USE	2
ORIGINALITY	6
LASTING INTEREST	4
OVERALL	3





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• ZX81 • ZX81 • ZX81

GAME: BANK ROBBER
MACHINE: ZX81 + 16K
JOYSTICK: NO
CARTRIDGE: ARCADE
SUPPLIER: ROMK
PRICE: £1.99

If you've ever laced yourself as the man who wears the sticking mask and holds the shotgun at a pretty bank clerk, then Bank Robber gives you your chance to get rich.

In Bank Robber you must move your man, a letter 'A', from your house on the right hand side of the screen, dash over to the bank and grab the cash. You'll



now be a pound sign, and must run back home with the dough. However you can only enter the bank or your house when the door is open.

GAME: GALACTIC TROOPER
MACHINE: ZX81 + 16K
JOYSTICK: NO
CARTRIDGE: ARCADE
SUPPLIER: ROMK
PRICE: £1.99

Stopping the aliens from landing on the earth is hardly an original theme for a computer game, but nevertheless such games keep appearing on the market.

Galactic Trooper is the latest blast the alien offering from Romk software. If you accept the graphic limitations of the ZX81 together with its lack of sound then Galactic Trooper will offer a fast and skilled wonder type of game.

The alien driver 'Y' is so disposed in



columns, by a very realistic mother ship. When a column is full the 'Y's begin to rain down on your laser base. If you are hit you lose one of your lives. Not only do you have to avoid the alien as they fall, you also have to avoid the explosion

GRAPHICS	5
SOUND	NONE
EASE OF USE	10
ORIGINALITY	7
LASTING INTEREST	4
OVERALL	4

There appears to be a lack of policemen in the area around the bank, but that doesn't mean that you're going to have an easy time. Sometimes it throws bricks, motorcycles, and pills at you.

As ever on the ZX81 the graphics are not usually awe-inspiring but they are adequate for the game. **SNC**

GRAPHICS	7
SOUND	NONE
EASE OF USE	6
ORIGINALITY	8
LASTING INTEREST	6
OVERALL	6

they make as they hit the ground.

There are three levels of play to the game and at the highest level the game does get a little fast. You are so busy concentrating on the falling aliens that you usually get killed by the explosion of one that has already crashed.

If you haven't had your fill of ZX81 space games already then Galactic Trooper is a good game. **SNC**

★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★ PCG HIT ★

GAME: FORTY NINER
MACHINE: ZX81 + 16K
JOYSTICK: NO
CARTRIDGE: ARCADE
SUPPLIER: SOFTWARE FARM
PRICE:



When a program for a ZX81 has a cassette cover that claims resolution identical to the Spectrum without any additional hardware you will probably be a little concerned about the verifiability of such a statement, but Software Farm's game Forty Niner lives up to this claim giving full high resolution graphics.

The game takes place in the 1899 Great American Gold Rush and our hero has moved to the west coast to make his fortune. You must collect as many gold nuggets as you can while avoiding the hazards of the mine.

Any normal person would have picked a mine with ordinary dangers, like rockfalls, but as every our character had to pick one inhabited by strange monsters.

The first monster that any explorer

will encounter is the Grendin. This is a very cute looking 'mouth on legs' who bounces away on the surface eating away at your waste earth pile trying to reach the entrance to your mine. Once it does there is no escape.

Next you face the Giant Rat which are truly intimidating, wiggling their tails as they hunt you around the mine.

They can even dig through the soil, suddenly jumping out in front of you - then you're a goner.

Your mine does have some unfriendly allies though. He can free snakes who will then wiggle their way to the surface

GRAPHICS	10
SOUND	NONE
EASE OF USE	7
ORIGINALITY	8
LASTING INTEREST	8
OVERALL	8

killing any rats they meet on their way. He can also knock out a support causing a small cave-in to block the vicious vermin.

Software Farm allow you to choose your own keys to play the game. There are five controls in all: up, down, left, right and knock out a support. In practice I found it better to rely on the snakes to kill the rats because if you knock out a support the rockfall occurs in front of you and you usually end up running over it yourself.

Forty Niner is definitely a program that shows what your ZX81 can really do and deserves one of those 'I had to keep going back for more' ratings. I wonder when the Spectrum version with sound and colour will make an appearance... **SNC**

IC 20 • VIC 20 • VIC 20 • VIC 20 • VIC 20

GAME: SPACE JOUST
MACHINE: VIC 20 UNEXPANDED
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: SOFTWARE PROJECTS
PRICE: \$4.95

In the original arcade version of Space Joust the player mounts a winged steed and stomps his enemies with a lance.

This version is understandably less ambitious and doesn't really have anything to do with jousting at all. It would best be described as driving dodgier cars in deep space.

The program loads in two parts. First the instructions and then the game. This means that you can't order to the instructions during play, but then the game isn't exactly difficult to understand.

You move a ship about the screen

swarming aliens. Providing you run them from above they will explode, otherwise an escape capsule which you can also run for extra points.

Ignore the capsule and it will sink to the ground, change back into a ship, and take to the air again.

This may sound too easy to be true, but the outcome of each collision depends on your angle of approach. If you don't run them from above, or if you

GAME: JET PAC
MACHINE: VIC 20 + 8K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: UTMATE
PRICE: \$3.50

This is a great game with excellent graphics and sound that first appeared

on the Spectrum but is now available in identical format for other machines.

Using alternate keys on the bottom row to move left and right, and any key on the third row to thrust him into the air, you must move your spaceship about the screen collecting three stages to build a rocket.

When you've done that you then have to fill it with fuel by collecting fuel pods as they appear from above. Once built

and fuelled, the rocket will blast into space as soon as you enter it.

All this would be very easy were it not for the thousands of aliens who rush in from either side of the screen, intent on your destruction. You can get your nose back by punching the fire button (or any key on the second row).

From time to time valuable items (gold bars, isotopes, and the like) will fall from the aliens and grabbing them

GAME: QUADRANT
MACHINE: VIC 20/20H/EXPANDED
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: ROMK
PRICE: \$6.99

The trouble with a lot of games for the unexpanded Vic is that they look as if

they had been written for the unexpanded ZX80, with a lot of colour added for the sake of appearances. Quadrant looks set to change all that. It's a good, fast game with scrolling graphics and endless hordes of aliens.

The program loads in two parts, first the instructions and then the game itself. A monstrous landscape scrolls from right to left, with a little man running for his life along the bottom of the screen.

Using the A and D keys you can make him run faster or slower, thereby moving him right and left respectively.

He cannot go off the edge of the screen, and every few yards a large outer scrolls beneath him.

You have to help him jump over this by pressing the Return key, otherwise he explodes. You have four lives altogether.

All this on its own would be enough

GAME: SHIFT
MACHINE: VIC 20 + 8K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: AUDIOGENIC
PRICE: \$3.95

Take the original version of Pac-Man, remove the power pills, the dots from

the maze, the on screen scoring and the hi-score facility, and add instead a few revolving doors.

Now give it a new name and put it on the market as a new arcade connection with a revolutionary new twist. That's Shift.

To be fair to Audiogenic this is a very playable game, but only if you've got a joystick. If you have to use the keyboard

then 'F' for up, 'L' for left, 'J' for right and 'D' down makes playing for any longer than a few minutes a tiresome and frustrating affair.

Add to this annoyance all the commissions mentioned above and you begin to see that unless those revolving doors add something very special then this is going to be one big yawn.

Well, the doors do make a big differ-

GAME: A COUNTRY GARDEN
MACHINE: VIC 20 + 8K
JOYSTICK: OPTIONAL
CATEGORY: ARCADE
SUPPLIER: SUPERSOFT
PRICE: £7.95

Entering this Country Garden you are greeted with a few bars from a familiar

English folk-song and given the opportunity to play Supersoft's version of *Cootyputa*.

The action is fast and the graphics are sound perfectly acceptable, but the only thing that ever crosses the screen (apart from the cootyputa) is a snail, and that lives up to its name by being about as difficult to hit as a garden wall.

Don't Supersoft know that even Little

Miss Muffit would miss spiders if they didn't appear in a game of *Cootyputa*?

Various unidentifiable crystals drop from above at high speed, but assuming you've got your finger on the export button you're going to hit them before they hit you, so they don't pose much of a threat.

The race of the game makes possible an interesting challenge. I think I must

GAME: ASK THE FAMILY
MACHINE: VIC 20/814K
JOYSTICK: NO
CATEGORY: QUIZ
SUPPLIER: COMMODORE/IBM/BBS
PRICE: £9.95

The popular quiz in which mommy, daddy and the little ones take on an opposing family in a test of general knowledge is now available in a version

for the Vic 20.

One team uses the space bar as a buzzer, while the other uses the function keys. It's almost the real thing as the teams crowd round, fingers hovering over the buzzers, to strike first.

All that's missing really is the jovial, but sometimes sharp, chairmanship of Robert Robinson.

The program loads in two parts, the first cassette holds the operating system and the second contains the actual

questions.

Once loaded however, the program is straightforward. Questions are offered first to one side and then, if they are unable to answer, to the other.

There is a good variety of questions on the program including general knowledge, spot the music and IQ test-style puzzles. For instance, who wrote the opera *Death in Venice*? At what temperature are Fahrenheit and Centigrade the same?



VIC 20 • VIC 20 • VIC 20

bump into them from below, then you'll quickly join your ancestors.

You have four lives, and are faced with different colored aliens who move faster as you progress through the different levels.

There is a hi-score facility that is updated between games but is not displayed during play, and the action is surprisingly speedy. If you don't have a memory expansion for your Vic then

this program is perhaps worth considering.

SC

GRAPHICS	5
SOUND	4
EASE OF USE	5
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	5



scores you extra points.

Once you've blasted away from the planet surface your ship rises to the top of the screen and then descends again, to land on another planet. Fighting off a different set of aliens you refill once more, collect as much treasure as you can, and then blast off again.

This process continues until you get bored and switch the machine off, but I can assure you that that won't be for a

very long time.

SC

GRAPHICS	5
SOUND	5
EASE OF USE	5
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	5



to keep you on the hop, but there is also the small matter of a long-standing disagreement between your little man and the Ancturian Macrobots.

'You know who they are, don't you?' They're the aliens who have nothing better to do but swoop overhead dropping bombs until you overruns them to victory with a quick jab at the B-key.

Unsurpassed Vic owners can now stop dreaming about memory add-ons.

Buy this game instead.

SC

GRAPHICS	5
SOUND	5
EASE OF USE	5
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	5



once. You can pass through them but the ghost chasing you can't.

There are three ghosts to start with, and these are soon joined by a fourth. They move faster as the game progresses and are very intelligent.

Despite the absence of power pills and exits, the chase do succeed in adding a new tactical twist that makes Skilly fun to play, even if it is a little

unsettling.

SC

GRAPHICS	4
SOUND	3
EASE OF USE	3
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	5



be the first person to wipe out every microbe on the screen in *CosmoPlex*.

The choice of movement keys (A and S for left and right, W for up, Z down and Return for fire) is ridiculously awkward so if you don't have a joystick you should think twice before shelling out for this game.

The rest of us may go for the sound and the speed, but there isn't much else

here to tempt the insect-slayers.

SC

GRAPHICS	5
SOUND	7
EASE OF USE	5
ORIGINALITY	5
LASTING INTEREST	5
OVERALL	5



So the questions are neither ridiculously easy nor outrageously difficult.

The computer's limited range of responses, though, can become very annoying, sometimes it punishes you if you get a correct answer: 'That's just the answer I'm looking for.'

Get it wrong and it sympathises: 'You should not.' Pretty soon you feel like punching the smug creep in the VDU.

But the main drawback to this program is that it contains only 120 ques-

tions — hardly enough to make it one you will want to return to.

PC

GRAPHICS	(None)
SOUND	(None)
EASE OF USE	7
ORIGINALITY	7
LASTING INTEREST	4
OVERALL	5



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GAME: FLOYD BANK
MACHINE: LYNX
JOYSTICK: NO
CARTRIDGE: ARCADE
SUPPLIER: ROMARK
PRICE: £9.99

I almost had to rob a bank to pay for my Lynx, but I settled for an overdraft instead. Now Romark have given me the

chance to make up for lost opportunity, but to be honest I wouldn't even rob a piggy bank to pay for this game, let alone pay for it out of my own pocket.

Your task is to penetrate the defences of Floyd Bank, steal the gold, and escape. There are four screens, each of which you must complete in a race against the clock.

You are given two attempts at each screen and if you succeed you pass on to the next. Like other Romark games the



GAME: ET PHONE HOME
MACHINE: ARCADE
JOYSTICK: NECESSARY
CARTRIDGE: ARCADE
SUPPLIER: ARCADE
PRICE: £29.95

ET is one of the few aliens who are not summoned to the screen just to be shot

at. Like a puddle, he's slow-witted to be shot at, and, as in the film, he needs help to 'phone home'.

You are ET's pal, Elliot, and your mission is to collect various pieces of junk needed to construct a communications device, so ET can make the call.

ET appears telepathically on the screen with the necessary objects, things like coin changers, umbrellas and fobs,



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• DRAGON • DRAGON

GAME: DANGER RANGER
MACHINE: DRAGON 32
JOYSTICKS: NECESSARY
CATEGORY: ARCADE
SUPPLIER: MICROREAL
PRICE: \$5.00

Danger Ranger from Microreal gives you the opportunity of taking on the role of a space-age treasure hunter.

Our intrepid adventurer visits the quest in the Chamber of Pasha, made up of a series of five platforms.

You have to collect 30 keys, one being located at either end of each platform.

The ladders are floating ones which move up and down at the edge of the platforms firing shots at your man for too often for comfort. Danger Ranger can jump over or shoot the shots and he can always shoot them with his own



laser and send them burning to the floor of the chamber. He must also look out for hovering eyes and radioactive bats.

On completion of level one our hero is transported to the next chamber. Now the Ranger can collect treasure chests while avoiding drops of deadly acid which fall from the ceiling and rise from the floor.

GRAPHICS	6
SOUND	6
EASE OF USE	7
ORIGINALITY	6
LASTING INTEREST	6
OVERALL	6

As if that wasn't enough to discourage you there are a number of demons in the chamber who as the game progresses require a greater number of shots to kill them.

Microreal should have a winner on their hands with Danger Ranger. A simple game to play but one that it will take you a lot of practice to master (it took me a good hour to get on to level two). But a practice made is invaluable to allow you to see each level without getting killed.

SNC

GAME: BLUE HEAP
MACHINE: DRAGON 32
JOYSTICKS: NECESSARY
CATEGORY: ARCADE
SUPPLIER: MICROREAL
PRICE: £7.95

If you have been down to the arcade recently you may have seen a game called Q-Ret that is becoming very popular. Blue Heap is Dragon Data's version. In this arcade game you jump around a three-dimensional pyramid changing the colour of the blocks you land on. In Blue Heap the pyramid has revolved into a rectangle but the idea of the game remains the same.

Jumping around a load of cubes doesn't sound too bad, it's when you realise that there are number of 'things' around that the trouble starts. Jumping



onto the blue egg or a monster called Oogal will score extra points, but I found that they jumped on me first.

'Spring' also lives on the blocks and he doesn't seem to take too kindly to you jumping around changing the colour of the blocks. Spring is very smart and takes the shortest route to your position killing you whenever the opportunity

GRAPHICS	8
SOUND	7
EASE OF USE	6
ORIGINALITY	7
LASTING INTEREST	8
OVERALL	8

arises.

You are given a couple of 'blue steps' to aid you in your cube colouring. Jumping onto one of these will transport you back up to the top of the screen. And if you can trick Spring into following you, a 500 point bonus is scored.

Blue Heap has a very simple scenario but is a challenging game to play. It appears to be so easy that you blame yourself for being killed which leads to a severe case of 'I'll do it next time!' Bug it and drive yourself nuts.

SNC

GAME: DEVIL ASSAULT
MACHINE: DRAGON 32
JOYSTICKS: NECESSARY
CATEGORY: ARCADE
SUPPLIER: MICROREAL
PRICE: £3.00

As ever you are in command of the last fighter and have been given the task of defending the earth.

But even though the scenario may sound familiar, the enemy isn't. Instead of the usual galactic being intent on destroying the Earth, the Devil himself has supposedly unleashed the forces of Hell.

You are given a choice of six skill levels which determine both the start level and the type of missile fired by your ship. Even numbers give a missile that flies straight up. Odd numbers allow you to move the missile left or right with the



joystick, something that I found very difficult because while you concentrate on guiding your missile to its destination your man usually ends up underneath an enemy's bomb.

Devil Assault has three attack waves. First on the attack are ramping bats. Instead of blowing up when hit they split into two, to cause twice as much trouble.

Next come the Crazy Robots. These

GRAPHICS	7
SOUND	7
EASE OF USE	8
ORIGINALITY	4
LASTING INTEREST	6
OVERALL	6

march down the screen dropping bombs as they go.

In the final wave the cute looking Springies appear. They bounce around the screen trying to stamp on your base. When hit a Springie may release a little Springie which tries to make it to the top of the screen.

Devil Assault is basically just another shoot-'em-up game with some original twists. All the graphics are large and well animated, a pleasant change from the usual character-sized shots that are impossible to hit. A very playable game, albeit in questionable taste.

SNC

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GAME: SHUTTLECAP
MACHINE: DRAGON 32
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: DRAGON DATA
PRICE: £12.95

Dragon Data claims that Shuttlecap is a futuristic, fast action, fun game that sells. Don't believe a word of it! The so-called speech is totally unintelligible

and the action is slow and extremely boring. At just under £13 this package is a snip-off. **SNC**

GRAPHICS	5
SOUND	5
EASE OF USE	5
ORIGINALITY	9
LASTING INTEREST	2
OVERALL	3



GAME: SPACE RAIDERS
MACHINE: DRAGON 32
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: MICROBIAL
PRICE: £8.00

You can choose to be a Rookie, Master or Expert in Microbial's version of the ever popular Space Raiders, complete

with the mystery-scoring mother ship. **SNC**

GRAPHICS	8
SOUND	5
EASE OF USE	8
ORIGINALITY	1
LASTING INTEREST	5
OVERALL	5



GAME: GLADIATORS
MACHINE: DRAGON 32
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: MICROBIAL
PRICE: £8.00

Gladiators gives the Dragon 32 owner a chance to play a good copy of the arcade favourite at home. The graphics of the

swooping and bombing aliens are rather small and hard to hit. **SNC**

GRAPHICS	5
SOUND	8
EASE OF USE	8
ORIGINALITY	1
LASTING INTEREST	5
OVERALL	5



GAME: WHIRLYD RUN
MACHINE: DRAGON 32
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: DRAGON DATA
PRICE: £10.95

Whirlyd Run is based on the arcade game Scramble, the rocket being re-

placed by a helicopter. **SNC**

GRAPHICS	8
SOUND	8
EASE OF USE	7
ORIGINALITY	4
LASTING INTEREST	7
OVERALL	7



GAME: RACE RACE
MACHINE: DRAGON 32
JOYSTICK: NECESSARY
CATEGORY: ARCADE
SUPPLIER: CABLE SOFTWARE
PRICE: £8.75

This is an advance on the old Snake theme. You have to guide a line through a grid, avoiding the obstacles placed in

your way by the computer. Graphics and sound are both pretty dull. **PC**

GRAPHICS	5
SOUND	3
EASE OF USE	4
ORIGINALITY	4
LASTING INTEREST	3
OVERALL	4



GAME: POOL BALL
MACHINE: DRAGON 32
JOYSTICK: NECESSARY
CATEGORY: SIMULATION
SUPPLIER: MICROBIAL
PRICE: £8.00

A two player game of pool which offers some very sophisticated features such as allowing you to put spin on the cue ball, just like the real game. If you are not a

pool fan you may find the game a little slow. **SNC**

GRAPHICS	7
SOUND	5
EASE OF USE	7
ORIGINALITY	1
LASTING INTEREST	5
OVERALL	5



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Make your own games — for the fun of it, says Jeff Minter, the brains behind Llamasoft

DO-IT-YOURSELF DESIGNING

The first thing you'll ask is: why should I design new games when I can buy them? The chances are, if you are a born-games player, that you bought your micro because of its game-playing capability. Doubtless you saw flawless games of Asteroids or Missile Command being played and looked forward to many evenings of galactic mayhem.

This is fine, but your problems start once you decide to buy some software. *Asteroids* or *Wrecking Crew*? *Missile Ace* or *Rockin' Command*? The commercial scene at the moment is a bit like the music industry: many software companies promoting their programmers like pop stars. However, think how boring it would be if up-and-coming new bands simply recorded versions of Barry Manilow's Greatest. Hired the video game industry, like the music industry, cannot survive just by copying established successes. We need new ideas!

There are many advantages to doing your own designing. Consider that an arcade game is designed with specialized game hardware in mind — usually such games lose much in the transition to home video.

When designing an original game, you can design with your own programming limitations in mind. No matter if you don't know machine code! If you design your idea around the limitations of Basic, you can still produce playable, enjoyable games.

In play, your friends are more likely to enjoy an original, new and challenging game than a barely recognizable and slow version of an arcade game. No one can say "The fourth screen is missing!" or decide your game for differing from the arcade original, because your game IS the original!

Most importantly, games designing is fun! You can turn the silliest ideas into games, create games based on your friends, memories, relatives or even your favorite animals. Vaporize your head-matter today!

Putting A Game Together

Step 1: Get Your Idea. This is, surprisingly, not too difficult. Don't try and force it; often a good idea will pop quite spontaneously into your head. You're not limited to outer space! Draw on everyday life where there are plenty of potentially amusing situations — my own game *Flower Power* was conceived



'If you have too many moving objects the game will be slow. Is the extra flying teaspoon necessary?'

while staring at a muddy moon lawn with a dog sitting on it, a zany imagination sufficed to turn this powerful scene into the horticultural holocaust portrayed in that game.

Keep a notebook handy to jot down any good ideas. Make plenty of notes; you can always discard unsuitable ideas along the way.

Talk your ideas over with another person, preferably a born player. You can strike sparks off each other, one saying possibilities the other may have missed.

Step 2: Waxy/Machine Merge. Once the idea is established, start thinking how you're going to put it into action on your machine. At this stage you will adjust your idea so that it fits your machine's display capabilities and your own programming expertise.

If you're going to use Basic, ask yourself: how fast does it need to be? The major limitation of Basic is the speed of moving objects. If you have too

many or they are too large, the overall game speed will be slow. Perhaps you could get by with two bouncing television instead of four? Perhaps the extra flying teaspoon isn't really necessary? (Don't be discouraged: I've seen very good games with only one or two moving objects on screen.)

You will naturally have to consider the memory limitations of your micro. You probably won't get a 16-screen epic into a 3K machine! Decide how much memory you're going to give to graphics data; 64 user-defined characters take up about half a K.

Step 3: Go For Graphics. Here is where the real fun begins. Sit down and design the graphic images you're going to use. If you have a machine with sprites or user-defined characters, invest in a good character/sprite editor program since this is a great aid to producing good-looking results. Don't worry if you're rotten at drawing: pixel graphics are different and much easier. Even I can produce a recognizable carpal.

Set up simple loops from Basic to animate your sprites or characters. You may discover your type has a limp, or your headmaster needs an extra pixel on the end of his nose. Get your graphics looking right, then save them. *Flower Power*. Having to re-do all your graphics because you erased the tape by accident is no joke!

Step 4: Write Out, Discard! You should now know how your game will be coded and have all the graphics ready for use. You can now get on and write the game — but do it in an organized manner! A program written in a hurry is a barrier to debug. A good game has three major sections: Initialization, Execution, Termination.

Initialization. This is the area of code which sets scenes to zero, defines screen colours and prints up the play area. It is the first thing to run and should prepare the system for the game proper. It should print up titles and, if memory allows, offer instructions to the players and demonstrate the game.

Execution. This is the core of the game. A good execution module might look like this:

```

new screen start
do screen move the
new screen move along
new screen fire bullets
new commando bombs
new screen end
  
```




As you can see, not much code! The secret of good games programming is to use lots of discrete sub-routines, installing and debugging each one before progressing to the next. Get your game moving properly before you let it live any longer. Make the initial on-screen bugs walk properly before they start using their bowtie boots.

By using self-contained modules like this, bugs are very easy to trap. You can selectively drop modules until the bug disappears, then debug the faulty module. Any good commercial programmer works in this way.

Termination. This section does things like printing scores over, pause over etc, checking for high scores and perhaps entering them in a table, and asking if you want another game. The more trials and tribulations you can put into Termination, the more professional your results will look. Don't worry about those if you haven't much memory, though: it's the game that's most important.



General Advice On Programming

Use the full colour capabilities of your particular machine. People do like to see nice bright colours in video games. But for example, don't use green to stand on a Dragon: most Dragon owners are quite enough green whilst entering their own programs. Likewise blue on the CROM64, or cyan-and-white on the Vis. Get away from the 'standard' colours; a different screen adds interest to a game.

'This 'getting away from the standard' should apply in other areas as well. If you have sufficient memory, define an alternate character set. Don't be tempted to pinch one from other people's games. An original and appealing character set helps stamp your originality on the game, as well as looking most impressive.

If your micro has musical facilities, be heaven's sake use them. It is disappointing if, in an otherwise excellent game, the soundtrack makes a noise like a Hoover and sounding an enemy results in an acrobatic flip. Use 'who' effects: they really sound great. Try three successive 'zap' noises, first at full volume, then at two-thirds, then at one-third. Echo effects are simple to program and are used extensively by professional arcade designers.



'Once your game is finished, you should give it a thorough testing. Do the snakes spit often enough?'

Perhaps you or a friend of yours can play or read music? If so, theme tunes for your games really enhance the enjoyment of play. A quick blast of Genesis at the end of an attack wave really goes down well. (If you're selling games, make sure you don't infringe the copyright on any money you use.) Most micros with good sound generators provide a very helpful table of musical note values for you to use.

The Final Steps: Testing, 1, 2, 3!

Once your game is finished, you should give it a thorough testing. Sit and play it for a long time. It is at this stage that you 'twink' your game to maximum playability. Perhaps your god moves too fast/slow? Do the snakes spit often enough? You will adjust delay loops, scoring values and the like during this final phase until your game feels 'right'.

It is essential that a designer has a good 'feel' for a game. This can only be developed with time, and by playing a lot of games. Spend time in arcades and playing games on your micro; eventually you will instinctively know the difference in feel between a good game and a bad one.

Get other players to try your game, preferably people who've not seen it before. They'll play it in different ways and perhaps by their different style of play, expose lurking bugs you may have missed. They will also provide an indication of the difficulty; you may find the first wave easy, but you designed it. Perhaps total novices need an easier first wave.

As a commercial designer I can vouch for the benefits of this approach. My new games are play-tested by novices for at least a week, and on several occasions bugs I'd not suspected have turned up.



The Future

You may well find that you have a natural flair for designing games. Good - you will be the video star of the future! At the moment, the emphasis in the industry is on programming skill and who can produce the best arcade copies. However, the days of the white-hot programmer are numbered. Machines are getting more complex, with features such as sprite graphics making the programming of games a simple affair.

In a few years' time, the arcades will have moved on into laserdiscs and true-3D systems unsuitable for home adaptation, and fast games languages coupled with hardware sprite graphics and service generators for in advance of today's best will make programming *Duckling King* or *Pac-Man* simple enough for anyone to achieve.

With machines doing more for you, the emphasis will shift from programming skills to design skills. Teams of game designers/musician/graphic artists will become common, perhaps even gaining individual followings like pop groups.

The future will be a great time for the game designer, allowing creativity in a totally new reinforcement medium. Break out of the rut of endless copying today while there's still time. We are on the verge of a whole new art form where the only boundaries are those of the imagination.

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Detailed Description

Lines 10-70 initialize sound and screen.
70-100 give initial lives and start game.
110-160 set up display program.
170-210 set up victory plane and put it on the screen.
220-240 update score and show display on screen.
250-320 firing routine check for hit.

330-340 move enemy plane about them.
340-350 back sound game loop.
400-510 routine to convert keyboard commands to aim direction.
520-740 (PROC) HIT—makes explosion with sound effects and adds to score when you hit a plane.

750-840 routine for end of game. Display statistics from game and allow another game if desired.
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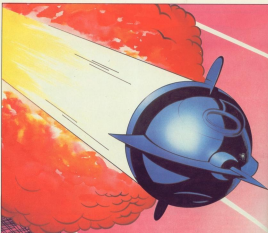
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Your 'score' is shown at the top of the screen and your overworked proton beam is replenished when your score hits 5000 hits.

DETAILED DESCRIPTION

Lines 10-100 Title sequence and instructions.

110 Sets up arrays.

120-150 Selects graphics page.

150-220 Prints display.

250 Sets variables.

260-270 Draws border lines ('ground' and 'sky').

280 Places aliens on screen.

290-300 Randomises the starting points for aliens' appearance on screen.

310-600 Check keyboard for pressing of the control keys, including, at Line 520, the routine for moving your missile base. Also fires 'missile'.

610-660 Scoring routine.

670 Clears screen.

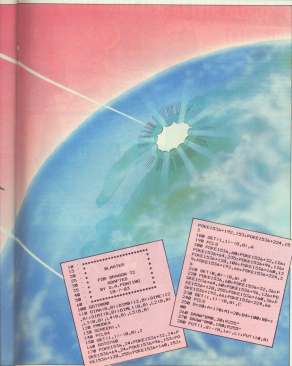
680-710 Checks and prints score, adjusts Hi Score.

720-740 Repeat routine.

800-900 Prints instruction forms (including at Line 760, the flashing 'Warning' signal).



N • DRAGON • DRAGON



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• DRAGON • DRAGON

[illegible][illegible]

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TYPES OF ALPH."
NAME PRINT" ONE SECOND MORE THAN
THE OTHER."
YEAR PRINT:PRINT" THE ALPH ARE
WORTH MORE THAN
LATE PRINT" NUMBER THEY ARE TO A
APPL."
NAME PRINT:PRINT" FREE SPAN TO
CONTINUE"
TIME IS:"TIME-TIME:TIME" THEN
YEAR
NAME CLEAINT" FOR EVERY 1000
PRINTS SECORD"
1100 PRINT" AN ALPH WILL WORK
ON THE TOP LINE."
1120 PRINT:PRINT" FOR EVERY 1000
PRINTS SECORD"
1150 PRINT" ALL PROGRESS ARE RE
PLENISH" AND YEAR PRINTS A
1180 PRINT" RESTORED TO 1001
NAME IS
NAME
1190 PRINT:PRINT:PRINT" FREE NO
AND TO START NAME"
1190 IF NAME=" THEN 1190
1200 GOTO 10

```

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Original program by Frank Bradburn

Your role in this game is of a cat guarding a large pile of cheese from hordes of hungry mice. You must prevent the mice from nibbling away at the cheese by intercepting their paths and catching them in your jaws. You gain points for how quickly you catch the mice and when all of the cheese has been nibbled the game is over and a playing and scoreboard display follows. Your score and best score are displayed throughout the game.

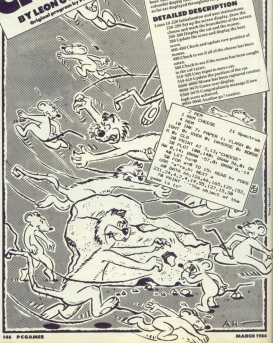
DETAILED DESCRIPTION

- Line 10: 120 Initialisation and user instructions.
- 100-120: Set up the screen display. Show the cheese and mark the boundaries of the cat.
- 130-140: Display the cat and the mouse.
- 150: Update the score and display the best score.
- 160-180: Check and update new position of mouse.
- 190: Check to see if all of the cheese has been eaten.
- 200: Check to see if the mouse has been caught in the cat's jaws.
- 210-220: Store input to move cat.
- 230-240: Update the position of the cat.
- 250-260: Mouse has been captured routine.
- 270-280: Game over display.
- 290-300: Compensating message if low high score achieved.
- 310-320: Another go? routine.

```

10 REM CHEESE
20 REM
30 REM 1/2 POWER 11 SPECTRUM
40 REM BY FRANK BRADBURN
50 REM
60 REM AT 3.12 "CHEESE"
70 REM: 1000, 1000, 1000, 1000, 1000, 1000
80 REM: 1000, 1000, 1000, 1000, 1000, 1000
90 REM: 1000, 1000, 1000, 1000, 1000, 1000
100 REM: 1000, 1000, 1000, 1000, 1000, 1000
110 REM: 1000, 1000, 1000, 1000, 1000, 1000
120 REM: 1000, 1000, 1000, 1000, 1000, 1000
130 REM: 1000, 1000, 1000, 1000, 1000, 1000
140 REM: 1000, 1000, 1000, 1000, 1000, 1000
150 REM: 1000, 1000, 1000, 1000, 1000, 1000
160 REM: 1000, 1000, 1000, 1000, 1000, 1000
170 REM: 1000, 1000, 1000, 1000, 1000, 1000
180 REM: 1000, 1000, 1000, 1000, 1000, 1000
190 REM: 1000, 1000, 1000, 1000, 1000, 1000
200 REM: 1000, 1000, 1000, 1000, 1000, 1000
210 REM: 1000, 1000, 1000, 1000, 1000, 1000
220 REM: 1000, 1000, 1000, 1000, 1000, 1000
230 REM: 1000, 1000, 1000, 1000, 1000, 1000
240 REM: 1000, 1000, 1000, 1000, 1000, 1000
250 REM: 1000, 1000, 1000, 1000, 1000, 1000
260 REM: 1000, 1000, 1000, 1000, 1000, 1000
270 REM: 1000, 1000, 1000, 1000, 1000, 1000
280 REM: 1000, 1000, 1000, 1000, 1000, 1000
290 REM: 1000, 1000, 1000, 1000, 1000, 1000
300 REM: 1000, 1000, 1000, 1000, 1000, 1000
310 REM: 1000, 1000, 1000, 1000, 1000, 1000
320 REM: 1000, 1000, 1000, 1000, 1000, 1000
330 REM: 1000, 1000, 1000, 1000, 1000, 1000
340 REM: 1000, 1000, 1000, 1000, 1000, 1000
350 REM: 1000, 1000, 1000, 1000, 1000, 1000
360 REM: 1000, 1000, 1000, 1000, 1000, 1000
370 REM: 1000, 1000, 1000, 1000, 1000, 1000
380 REM: 1000, 1000, 1000, 1000, 1000, 1000
390 REM: 1000, 1000, 1000, 1000, 1000, 1000
400 REM: 1000, 1000, 1000, 1000, 1000, 1000
410 REM: 1000, 1000, 1000, 1000, 1000, 1000
420 REM: 1000, 1000, 1000, 1000, 1000, 1000
430 REM: 1000, 1000, 1000, 1000, 1000, 1000
440 REM: 1000, 1000, 1000, 1000, 1000, 1000
450 REM: 1000, 1000, 1000, 1000, 1000, 1000
460 REM: 1000, 1000, 1000, 1000, 1000, 1000
470 REM: 1000, 1000, 1000, 1000, 1000, 1000
480 REM: 1000, 1000, 1000, 1000, 1000, 1000
490 REM: 1000, 1000, 1000, 1000, 1000, 1000
500 REM: 1000, 1000, 1000, 1000, 1000, 1000
510 REM: 1000, 1000, 1000, 1000, 1000, 1000
520 REM: 1000, 1000, 1000, 1000, 1000, 1000
530 REM: 1000, 1000, 1000, 1000, 1000, 1000
540 REM: 1000, 1000, 1000, 1000, 1000, 1000
550 REM: 1000, 1000, 1000, 1000, 1000, 1000
560 REM: 1000, 1000, 1000, 1000, 1000, 1000
570 REM: 1000, 1000, 1000, 1000, 1000, 1000
580 REM: 1000, 1000, 1000, 1000, 1000, 1000
590 REM: 1000, 1000, 1000, 1000, 1000, 1000
600 REM: 1000, 1000, 1000, 1000, 1000, 1000
610 REM: 1000, 1000, 1000, 1000, 1000, 1000
620 REM: 1000, 1000, 1000, 1000, 1000, 1000
630 REM: 1000, 1000, 1000, 1000, 1000, 1000
640 REM: 1000, 1000, 1000, 1000, 1000, 1000
650 REM: 1000, 1000, 1000, 1000, 1000, 1000
660 REM: 1000, 1000, 1000, 1000, 1000, 1000
670 REM: 1000, 1000, 1000, 1000, 1000, 1000
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690 REM: 1000, 1000, 1000, 1000, 1000, 1000
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770 REM: 1000, 1000, 1000, 1000, 1000, 1000
780 REM: 1000, 1000, 1000, 1000, 1000, 1000
790 REM: 1000, 1000, 1000, 1000, 1000, 1000
800 REM: 1000, 1000, 1000, 1000, 1000, 1000
810 REM: 1000, 1000, 1000, 1000, 1000, 1000
820 REM: 1000, 1000, 1000, 1000, 1000, 1000
830 REM: 1000, 1000, 1000, 1000, 1000, 1000
840 REM: 1000, 1000, 1000, 1000, 1000, 1000
850 REM: 1000, 1000, 1000, 1000, 1000, 1000
860 REM: 1000, 1000, 1000, 1000, 1000, 1000
870 REM: 1000, 1000, 1000, 1000, 1000, 1000
880 REM: 1000, 1000, 1000, 1000, 1000, 1000
890 REM: 1000, 1000, 1000, 1000, 1000, 1000
900 REM: 1000, 1000, 1000, 1000, 1000, 1000
910 REM: 1000, 1000, 1000, 1000, 1000, 1000
920 REM: 1000, 1000, 1000, 1000, 1000, 1000
930 REM: 1000, 1000, 1000, 1000, 1000, 1000
940 REM: 1000, 1000, 1000, 1000, 1000, 1000
950 REM: 1000, 1000, 1000, 1000, 1000, 1000
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970 REM: 1000, 1000, 1000, 1000, 1000, 1000
980 REM: 1000, 1000, 1000, 1000, 1000, 1000
990 REM: 1000, 1000, 1000, 1000, 1000, 1000
1000 REM: 1000, 1000, 1000, 1000, 1000, 1000

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ZX-SPECTRUM

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It gave rise to the acrobatics with four acrobats after landing your craft on Mars and awaiting the external help. You have to fight your way through these sets of traps caused by robbers with lethal firing powers and laser weapons. The third stage represents the destruction of the alien craft, whereas the mission finale

TABLE 1

All the fun of the arcade games brought to life with animated graphics. Football, tennis, life and rolling barrels provide fun for the whole family. Enjoy the collapse of King's Isle when you have finally reached the summit in the North section. Half of tower and stone cliffs are included.

[illegible]

A returning action-packed game with superb large animated graphics. Great use of the Atari and wave in intricate patterns as they deal their deadly bombing moves which will destroy your base on contact. While you are busy defending yourself the Hands will feed on your helplessness, capturing returning and shot results. At M3, game complete with high score tables that will leave your mind with its graphics and sound effects.

	1980-1989	1990-1999	2000-2009
Number of cases	67	100	100
% Male	70	70	70
% White	70	70	70
% Black	10	10	10
% Hispanic	10	10	10
% Asian/Pacific Islander	10	10	10
% American Indian/Alaskan Native	10	10	10
% Unknown	10	10	10
% Married	70	70	70
% Divorced	10	10	10
% Single	10	10	10
% Widowed	10	10	10
% Unemployed	10	10	10
% Employed	70	70	70
% High school graduate or less	70	70	70
% Some college	10	10	10
% Bachelor's degree or more	10	10	10
% Health insurance coverage	70	70	70
% No health insurance coverage	10	10	10
% Medicaid/Medicare	10	10	10
% Private insurance	10	10	10
% Unknown	10	10	10
% Living alone	10	10	10
% With family	70	70	70
% Other	10	10	10
% In nursing home	10	10	10
% In assisted living facility	10	10	10
% In long-term care facility	10	10	10
% In residential treatment center	10	10	10
% In psychiatric hospital	10	10	10
% In jail/prison	10	10	10
% In other institution	10	10	10
% Unknown	10	10	10

Brings the well known arcade game to life on the Spectrum screen in glorious colours. Defend your cities from this mischievous and deadly foe. 10 skill levels.

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2
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An exciting game based on the arcade game *Parma*, which combines fast action with strategy. Giant insects hiding under the old paint surface are released by your paint brush. You require fast action and quick thinking to select them and bring the paint. The game is 100 percent machine code and Hi-Res. Graphics also includes hi-score and numerous screens.

1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 26

Popular arcade game. Attracting 300k with brilliant online graphics and sound effect. Features include music, costumes, lady bugs, kettles, saw, horses, and logs.

Super-grocery pack for younger children with bright, colorful graphics and sound effects. Everedette's Newville Store plus Super Shop O's and W's, Ward Juvenile, Rompage, Duck Wood and Wild Chicks.

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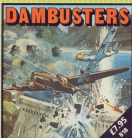
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Keywords: child sexual abuse; disclosure; social support; self-esteem

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1990 年 1 月 1 日以前竣工投产的固定资产，其折旧年限按国家有关规定执行；1990 年 1 月 1 日以后竣工投产的固定资产，其折旧年限按《企业所得税暂行条例》及其实施条例的有关规定执行。

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PUZZLES • PUZZLES •

BRAIN PENETRATOR

BRAIN PENETRATOR

The president, secretary and treasurer all chose computer clubs (nine people in all) each play a game of Penetrator on their own shafts, but her Spectrums. Harriet is the highest scorer from her club, but still is lower than those of the highest scorers from the other most clubs.

Jocey gets the lowest score of any president, but it's higher than those of the lowest scoring secretary and treasurer. No one scored the same. *—Joe Williams* Or can't you tell?

any possible future
 research required highest - treatment of patients

FREE PAPER

I've just bought a Spectrum," said Alexander, "and I can't work out how you enter the commands BASIC and PRG B."

'It's simple,' said Belinda with a smile. 'Each one of the single keys, PEEK and POKE, can DO IT.'

"My poor, you're right," exclaimed Alexander, after a second's thought. "PERE and PERE are keys. Look!" He wrote out an addition sum like this:

1998
1999
2000

'You just have to substitute each letter for a different number. And if E is greater than L , there's only one solution.'

Table 1

THE MYSTERY

A piece of computer paintout is, for some stupid reason, painted with ink and pressed on to another sheet the same size so that both sheets are marked with the ink all over.

Now, even more pointedly, the first sheet is folded several times into a smaller shape and placed on the second sheet so that one part of it overlaps the edge.

The question is, is it inevitable that at least one point on the folded sheet will still be directly above the mark it made on the unrolled sheet? (Can you prove it?)



NUG SPOTTING

Take a squint at the programs below. It's a badly written attempt at getting the computer to add together all the numbers from one to 100.

As it stands, the program will give the wrong answer. But it can be debugged without deleting anything, by

simply inserting a single character, or even the "How?"

10 runs (n = running total, N varies from 0 to 100.)

Abstract

2009 11.11.17 10:00

1000

— **117** —

Figure 1. The proposed model.

PAGE **LINE**

THE UNIVERSITY OF CHICAGO

ADVENTUROUS ANAGRAM

low you can produce efficiencies or animals which you could come across in an adventure game. Some letters have already been put in the right places to help you.

(1) _____ G _____ N _____ TWY
(2) _____ E _____ FIVE
(3) _____ L _____ IN AD
(4) _____ C _____ GRAM
(5) _____ A _____ FIVE
(6) _____ L _____ CLAM
P _____ INAGRAM
E _____

**ANSWERS AT THE BOTTOM
OF THE PAGE**

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to ensure that, when making the change, the company could not be held liable for any of the things that were done in the past. The company could not be held liable for any of the things that were done in the past.

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