

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 39 £1.50

August/September

XL/XE

**CATCH
DAY**

Go fishing on
your Atari

**MORE
MACHINE CODE
ROUTINES**

DESK TOP PUBLISHING
on the 8-bit
WITH PAGE MARSHAL

ST FILE



STOS type-in listings

MAKING MUSIC with MIDI

EXCLUSIVE REVIEWS of NEW ST ADVENTURES

plus ... GOLDRUSH ... TIMERUNNER ... KICK OFF ... GRIDRUNNER
BIG CHALLENGE - XYBOTS - and much more

HAWKQUEST - THE GAME YOU CAN'T GET
THE TIPSTER - hints and tips on your favourite games

STOS

GETTING IT DOWN ON PAPER

Peter Hickman introduces a new programming series with a utility that will help you submit programs together with an animated picture that you can type in

For some years now EAGLE has had a reputation for publishing high quality program listings for the 8-bit machines, while ST owners have had little except reviews and small programs written in ST BASIC (and these sick bugs away at the back) and Assembly Language. Well now STOS has arrived and with it comes the opportunity for everybody in the 16 bit community to have a hand at creating high programs (in the truest sense of their own name).

While STOS is the almost perfect language for magazine listings as far as basic programs go, you may have been wondering how you can include all those juicy options, music, and screens when they are held on MMS, live on disk and not GATA statements within the main program. Well, the guys at JAWG/MIRAMAX have thought of this problem, and in *your* *Accessories*

```

0001 *****
0002 *****
0003 *****
0004 *****
0005 *****
0006 *****
0007 *****
0008 *****
0009 *****
0010 *****
0011 *****
0012 *****
0013 *****
0014 *****
0015 *****
0016 *****
0017 *****
0018 *****
0019 *****
0020 *****
0021 *****
0022 *****
0023 *****
0024 *****
0025 *****
0026 *****
0027 *****
0028 *****
0029 *****
0030 *****
0031 *****
0032 *****
0033 *****
0034 *****
0035 *****
0036 *****
0037 *****
0038 *****
0039 *****
0040 *****
0041 *****
0042 *****
0043 *****
0044 *****
0045 *****
0046 *****
0047 *****
0048 *****
0049 *****
0050 *****
0051 *****
0052 *****
0053 *****
0054 *****
0055 *****
0056 *****
0057 *****
0058 *****
0059 *****
0060 *****
0061 *****
0062 *****
0063 *****
0064 *****
0065 *****
0066 *****
0067 *****
0068 *****
0069 *****
0070 *****
0071 *****
0072 *****
0073 *****
0074 *****
0075 *****
0076 *****
0077 *****
0078 *****
0079 *****
0080 *****
0081 *****
0082 *****
0083 *****
0084 *****
0085 *****
0086 *****
0087 *****
0088 *****
0089 *****
0090 *****
0091 *****
0092 *****
0093 *****
0094 *****
0095 *****
0096 *****
0097 *****
0098 *****
0099 *****
0100 *****

```



```

30 rem      I HOPE YOU TYPED THE DATA FROM TABLE 1 INTO THE INPUTS ACCURATELY!!
30 i
30 i
40 key off : mode 0 : curs off : flash off : hide
50 cls COL#031
60 for LOOP#1 to 15 : erase LOOP : next LOOP
70 reserve as work 7,1254
80 reserve as screen 8
90 cls 0
100 i
100 i
100 i
100 rem      LOAD AND UNPACK PICTURE
110 load "pictural.abb",7
120 unpack 7,8
130 erase 7
140 i
170 i
180 rem      SPAN SCREEN BLOCKS
190 PAT18=screen#18,0,0 to 16,16!
200 PAT18=screen#18,0,17 to 16,33!
210 PAT18=screen#18,0,34 to 16,50!
220 PAT18=screen#18,0,50 to 16,67!
230 WRITES=screen#18,0,68 to 200,119!
240 i
250 i
260 rem      DRAW FOUR EVEN DECREASING BOXES
270 for LOOP#1=0 to 170 step 16
280 for LOOP#2=0 to 320 step 16
290 screen#18,LOOP#1,LOOP#2=PAT18
300 next LOOP#2
310 next LOOP#1
320 i
330 for LOOP#1=16 to 170 step 16
340 for LOOP#2=16 to 384 step 16
350 screen#18,LOOP#1,LOOP#2=PAT18
360 next LOOP#2
370 next LOOP#1
380 for LOOP#1=32 to 199 step 16
390 i
400 for LOOP#2=32 to 370 step 16
410 screen#18,LOOP#1,LOOP#2=PAT18
420 next LOOP#2
430 next LOOP#1
440 i
450 for LOOP#1=48 to 143 step 16
460 for LOOP#2=48 to 384 step 16
470 screen#18,LOOP#1,LOOP#2=PAT18
480 next LOOP#2
490 next LOOP#1
500 i
510 i
520 rem      PLOT TEXT ONTO SCREEN 8 THEN COPY WHOLE SCREEN TO PHYSIC
530 screen#18,80,80=WRITES
540 get palette 081
550 screen copy 8 to physic
560 erase 8
570 i
580 i
590 rem      INTELLIGENT COLOUR CYCLING USING INTERRUPT DRIVEN FLASHES
600 for LOOP#11 to 14
610 COL#LOOP#11=light Green Colours (LOOP#1,20,30+*,4*)
620 next LOOP#1
630 wait 40!
640 flash 11,*(*=COL#001+*) (*=COL#011+*) (*=COL#020+*) (*=COL#030+*)
650 flash 12,*(*=COL#011+*) (*=COL#021+*) (*=COL#030+*) (*=COL#000+*)
660 flash 13,*(*=COL#021+*) (*=COL#031+*) (*=COL#000+*) (*=COL#010+*)
670 flash 14,*(*=COL#031+*) (*=COL#001+*) (*=COL#011+*) (*=COL#020+*)
680 clear key
690 wait key
700 i
710 i
720 rem      THIS NEXT LINE DOES THE SAME AS TYPING IT IN DIRECT MODE!!
730 rem      ANYBODY GOT ANY IDEAS FOR SELF MODIFYING PROGRAMS?
740 put key "reset"

```

NEW

PAGE 6 PUBLISHING'S

ATARI

XL/XE

USER

Issue 40 £1.50
October/November

THE SUBLOGIC STORY

Behind Flight Simulator 2
the full story
plus reviews

TYPE-IN FUN!
MEAN MOTOR
and lots more

ADD SOUND EFFECTS TO YOUR PROGRAMS
with our ready made routines

ST FILE



STOS type-in listings including a **SLIDE SHOW**
and **REDEFINED KEYBOARD**
BEGINNERS GUIDE TO MAKING MUSIC WITH MIDI
NEW GAMES FROM ATARI - BORODINO - ARMADA
- **ENTERPRISE - STARBREAKER**
READERS OFFERS ON STOS PRODUCTS!

The ST FILE

STOS COLUMN

Redefining
the keyboard
Mini Slide Show



ALL POINTS BULLETIN - from Infogrames - growing cops and robbers has never been so much fun!



NORTH AND SOUTH - from Infogrames re-creates four years of the American Civil War



BROKEN SUN is the first role playing game from Infogrames



CARTOON CAPERS - winner of Mandrake's STOS programming competition and soon to be released on the first official STOS version game



IRON TRACTORS - a two person arcade adventure again from Infogrames

ST NEWS

Infogrames seem to have a busy schedule ahead despite, it seems, now working from France once again (that's where all the fun is coming from) with the launch of their PocketBall label which will bring you budget price (that means 49-99) versions of the Infogrames hits like **CAPTAIN BLOND**, **THE CITY CRASH**, **MAGNANIMUS**, **PHOENIX** and **TURN OF**. For some reason these games will only be available on double sided disk despite being originally based on single sided disks. New releases from Infogrames include **NORTH AND SOUTH** a game based on the American Civil War and combining strategy, tactics and arcade, **BROKEN SUN** has been under development for over a year by a programming team of five people so it should be good. It is a role playing game based on a far planet where a strange island is growing at an alarming rate, the tropical adventures must discover the secrets of a new element on the planet. Demand is expected on the success of Tribal Pursuit with the release of **HYPERMARTIN**, the computer version of the popular board game. Of course there's no stopping Mandrake who in their many guises now seem to have grabbed a large share of the games market. **RAINBOW WARRIOR** is a new unique computer game in which 'players conduct preordained, direct actions to bring about a better world'. What, no Mandrake? **ACTION FIGHTER** is based on the Sega arcade game, four tough sections battling over land and sea, the one going to run out of runs so here's just a list of others to look out for in the coming months under the Mandrake, MicroMandrake or Hardball labels - **SPORT CAR RACER**, **POWER OF BABE**, **RAINBOW ISLANDS**, **ORIENTAL GAMES**, **RICH DANGEROUS**, **DISINFORMED**, **BAT FACE**, **EPHON**, **QUARTZ**, **TURNING**, **MIDWINTER** and **CONVANCE**. Well, any room for other publisher's stuff on the shelves? Popular games can have even more fun with the release by Electronic Arts of **POPPLED**, the **PROMISED LANDS** which has data for the new world. Activision also keep busy with **CONCEALMENT** (planned for December) and **ALIENED HEART** in which you have to collect the mystical spirit balls from your stoned opponents. Not sure what category that fits into! Also due are **SUPER MONSTERBOY** and **STRATIS DICE**. Activision also have a flight simulator planned called **BOMBED**. Could be interesting. Time to go, look out for reviews of many of these games as (if) they come in.

THE STOS COLUMN

Peter Hickman brings you the first of your contributions plus a Scrolly Message Editor and Slide Show all of which can be typed in with STOS Basic.

In the last issue I did not have a chance to outline the general content of this ECHO series, so at the moment this column does not have a fixed format; in some issues I will fill three or four pages with a tutorial, while other issues will contain programs with a small breakdown of each so everybody can study and learn from them.

A small problem will be the length of the programs published. I have written lots of programs that can be done in less than 100 lines.

In the magazine as I intend to put them into the Pascal 3D library together with quite a few other books and fonts. Now this is nice but let's face it, a volume set of disks filled with these things would be awfully hefty, and this is where you come in! If I would like you to do it, send me your address in the end of the article, all your options, music, fonts, games, services, programs, even animated cartoons and I will try to include some of them in this STOS column. The real will be organized into separate disks and then put into the Pascal 3D library for everybody to study, use and experiment with. Any programs that you wish to describe for the STOS column/ disks do not have to be heavily commented or be accompanied with an instruction manual the size of War and Peace. For all of the short programs I decide to include in the column I will do a line-by-line breakdown, so either STOS users can learn how to make more efficient use of the commands available within the current version of STOS, or, of course what would be nice is an upgrade to STOS which allowed PASCAL-like procedures and dynamic data structures (more on this subject next month).

Abstract

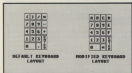
New to this issue's programs, the first of which is a contribution from Laurence Myers of Gloucester. His program is a small listing (see PROGRAM 1) which uses the XROS "EDIT" call to modify the layout of the numeric keypad (see FIG.1) to make typing in those memory banks really easy.

Enter the listing as follows:

- 1) Load the "IMPLANTA.AC" assembly from your STOS backup disk.
- 2) Enter PROGRAM 1, ignoring the 8086 message if you wish.
- 3) Line 1170 causes a error which is fortunately trapped by the program and is invariable to the case, but even so, you should change it to:

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

Save the modified version of the program back onto your computer disk.

[illegible]

Laurence Myers redefined keypad program

REPORTING HOW IT WORKS

LIST: 38 dimension 0 numeric array. The array is 32 longwords big and if my old 'A' level computer science teacher was to be followed there are 3 words in a longword and 2 bytes in a word, giving space for 128 bytes of information.

LINE 30 finds the starting address of the section.

LINE: 14-16 read in the dots and PORE is one byte at a time into the memory occupied by the numeric value 0000

LINES 43-71 contain the keyboard definition:

Usage: `76` calls `SHR32` routine number 16, the top command passes the address of the `SHR32` array (contained in the `SHR32` variable), it also passes two -] parameters to the routine: these tell it not to redefine the shifted or sign-extended (extended) format.

NOTE 1.173: calls 500-05 34, this restores the default locale and format

The subject of redefining the keyboard layout is far by long, not to mention complicated, to this column to cover in any depth but if you would like some more information on this subject I can recommend a book called **ATARI II INTERFACES** by ARTHUR BERN (0-814419-44-1, it does contain a few errors, but is still one of the better books available on the ST.

WHOLLY HOLY

below, that's the serious stuff out of the way now for the light relief. The next program for **PRODIGAM** 2.0 is a simple no-frills wordy demo that lists me (quoting or anything like, it doesn't even allow the default colour palette). I have included this demo in the column this month because the one I had been working on appeared to call **prodigam** and since the memory banks had been listed to look up the last row of **SDRAM**.

11154 11 79 1985

LEVER 110-140 define the variables that the tool is allowed to

LINE3: 170-230 create a striped screen by drawing eight lines (about 8 x 15) at the top of the screen. They can then go back into TMAPS using the SCREEN command and could make the rest of the screen.

[illegible]

Listing 2. Scrolling Text Messages

Try playing with the STOP command in line 290.

LINE 290 uses the STOP command to 'cycle' colours 0-15. I have described this as 'static' because the command isn't flexible enough. A real improvement would have been made if the command allowed you to cycle various colours out of sequence, for example cycling colours 8, 10, 11, 14 is impossible. The routine I wrote to cycle colours using FLASH is much more flexible (see last issue).

LINE 295 defines the scrolling area.

LINEs 300-395 paint the text in the visible TEXT1 and makes it 'scrollable', this is a simple effect which can be seen in quite a few 8-bit Atari basic games. The effect is achieved by positioning the cursor at the bottom of the screen and using the SCROLL UP command, this creates a new line at the bottom of the screen and pushes one off the top. The SCROLL DOWN command is then used to do the opposite.

LINE 390 moves the text off the screen quickly.

LINEs 420-480 paints a single character at the far right of the screen and scrolls it pixels left, the next character is then painted and is once again scrolled left.

LINE 490 is the end of the repeat loop and makes sure the text is painted from the beginning over and over again. The logic behind the UNTIL FALSE command is quite simple and is easily explained with and going into binary mathematics, the statement is a short version of saying UNTIL TRUE=TRUE and because FALSE is a reserved word and doesn't change its value FALSE can never equal TRUE!

A QUICKIE SLIDE SHOW

The last program (see PROGRAM 3) is one that was written by a friend of mine who wishes to remain anonymous but goes by the name of Gong the Frog. It was written as a bet in two minutes flat! That probably explains the sloppy way it was put together, still it's quite functional. It is in fact a slide show and can be very handy, especially if saved on an accessory. I use it quite a lot when programming in STOS because I can never remember what I have called the picture files I may be currently using.

HOW IT WORKS

LINEs 70-90 move a temporary screen and makes any junk on the current physical screen.

LINEs 110-200 make up the main loop, the file search specification is put into the variable SPIC1 and then the program jumps to the loading routine. This is repeated separately for PIC1, PIC2 and PIC3.

LINEs 260-290 open a window and ask the user which drive they would like the program to search.

LINEs 310-340 set up the two arrays and windows which will contain the drive A or

```

10: row = 0
20: row = 0
30: row = 0
40: row = 0
50: row = 0
60: row = 0
70: row = 0
80: row = 0
90: row = 0
100: row = 0
110: row = 0
120: row = 0
130: row = 0
140: row = 0
150: row = 0
160: row = 0
170: row = 0
180: row = 0
190: row = 0
200: row = 0
210: row = 0
220: row = 0
230: row = 0
240: row = 0
250: row = 0
260: row = 0
270: row = 0
280: row = 0
290: row = 0
300: row = 0
310: row = 0
320: row = 0
330: row = 0
340: row = 0
350: row = 0
360: row = 0
370: row = 0
380: row = 0
390: row = 0
400: row = 0
410: row = 0
420: row = 0
430: row = 0
440: row = 0
450: row = 0
460: row = 0
470: row = 0
480: row = 0
490: row = 0
500: row = 0
510: row = 0
520: row = 0
530: row = 0
540: row = 0
550: row = 0
560: row = 0
570: row = 0
580: row = 0
590: row = 0
600: row = 0
610: row = 0
620: row = 0
630: row = 0
640: row = 0
650: row = 0
660: row = 0
670: row = 0
680: row = 0
690: row = 0
700: row = 0
710: row = 0
720: row = 0
730: row = 0
740: row = 0
750: row = 0
760: row = 0
770: row = 0
780: row = 0
790: row = 0
800: row = 0
810: row = 0
820: row = 0
830: row = 0
840: row = 0
850: row = 0
860: row = 0
870: row = 0
880: row = 0
890: row = 0
900: row = 0
910: row = 0
920: row = 0
930: row = 0
940: row = 0
950: row = 0
960: row = 0
970: row = 0
980: row = 0
990: row = 0

```

B selection.

LINEs 990-1010 wait for the left mouse

button to be pressed in one of the zones.

LINEs 1020-110 get the names of the pictures to load using the DIR FLASH and the DIR NEXT command.

LINEs 1100-1190 clear memory bank 0 and loads a picture into it.

LINE 1200 fades the physical screen colours to black.

LINEs 1220-1230 copies the picture in bank 0 into the physical screen and fades all the colours to those stored in bank 0.

LINE 1240 - if a key is pressed this line pauses until another keypress is detected thus keeping the picture on the screen.

NEXT TIME

So that's all for this issue, and if all goes well next time I will be bringing you a full report on the STOS support given by manufacturers of the PC show, a few more listings than this month (well at least I gave your fingers a rest), perhaps a STOS game, and if I can get hold of a copy I will do a quick comparison between STOS and it's now running mate AMOS (yes I know it's an AMIGA package but I promise to have a distinction both after playing with the little beastie).

Oh before I give you my address I would just like to thank Lawrence Meyers and Neil Matthews for being the first people to write to me. Please remember that I can not guarantee the immediate return of your disks unless you include a SAE.

Write to Peter Holkman, at
34 CLEVELY ESTATE,
WORMHOLT ROAD,
LONDON W12 0LX

See inside front cover for
READERS OFFERS
on STOS BASIC and
other STOS accessories

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 41 £1.75

December/January

XL/XE

SNAKES ALIVE!

A great game for
up to twenty players!

COLOUR DUMP
for the STAR LC-10

CONFESSIONS OF AN ADVENTURE ADDICT
Teach your children maths the fun way

ST FILE



STOS • a Type-In game and more!
MAKING MUSIC • Interested in computer music?
INDIANA JONES - THE GRAPHIC ADVENTURE
POSTMAN PAT - FUN IN GREENDALE
Reviews include
Paperboy • Rick Dangerous • Shinobi • Gilbert • Aaargh

THE STOS COLUMN

A full game to type in, a useful subroutine, lots of news plus a review of a new flight simulator program written in STOS and more besides!

- Peter Hickman has been busy!

This issue's column, is a real mix-mash of news, reviews and type in listings. Since the last issue so much has happened with STOS it's hard to know where to begin.

FIRST THE NEWS

Chris Payne (marketing manager of STOS) has sent me the latest issue of the STOS User Club newsletter and what can I say except it's great. I was one of those cynics who really did not believe that Monarchie would be supporting STOS for very long so I never even bothered to send off my registration card, which was a great mistake because the newsletter is both well written and packed with useful information to let like this column! If, if you want more STOS info then I can provide in these few pages and your cheque and

postal order for ten pounds (that's for six issues) off to Aaron (Fothergill) who is the new editor of the newsletter (his address can be found at the end of the article next to mine). The release of AMOS (the Amiga version of STOS) has, also, been delayed until January, I have seen the specifications of the new language and without typing it too much AMOS looks pretty mindboggling.

What next? Ah yes, more news, Monarchie are hoping to launch various new STOS products over the next few months, these have been designed to complement the existing STOS range and allow you to add some fancy bits to that neat mega game you are writing (you are writing a mega game I assume?) Seriously though the first release is the STOS Compendium which contains four of the top entries for the recent STOS competition (including one from Aaron Fothergill), each game has been completed but the source code will be on side two of the disk so everybody can dissect, disassemble, run up and generally mutilate the games to suit their own taste. The second automated release is MUSIC MANICIAN, a full featured music editor similar in design to programs like the Music Construction Kit by Electronic Arts or the Music Studio by Activision (only much better). This editor will run on an economy and will include a MIDI input option.

By spring '90 Monarchie will also have a version of the Vidi ST Digitiser (by Rombo Productions) with all accompanying software written in STOS, images grabbing video images and turning them into sprites for their forthcoming mega game. What last but not least is STOS 3D which (surprise surprise) is a 3D extension for STOS and includes features such as full animation and collision detection for any 3D object. Gosh, I almost forgot Stephen Hill (author of the pretty old, not too bad, better than most I've seen, STOS manual) has a book coming out it should be in the shops as you read this thing. QUAD MANUAL: STARS ST and STOS BASIC, it will be published by Signet Press and has a promotional price of £11.95, the question is will it be long lasted? As these products become available I will be doing full reviews including a VTM (video for money) guide based on how badly you need these extras in order to write decent software. The only thing is I'm going to

```

100: REM *****
101: REM GET FILE EXTENSION FOR NEW STOS BASIC
102: REM *****
103: REM *****
104: REM *****
105: REM *****
106: REM *****
107: REM *****
108: REM *****
109: REM *****
110: REM *****
111: REM *****
112: REM *****
113: REM *****
114: REM *****
115: REM *****
116: REM *****
117: REM *****
118: REM *****
119: REM *****
120: REM *****
121: REM *****
122: REM *****
123: REM *****
124: REM *****
125: REM *****
126: REM *****
127: REM *****
128: REM *****
129: REM *****
130: REM *****
131: REM *****
132: REM *****
133: REM *****
134: REM *****
135: REM *****
136: REM *****
137: REM *****
138: REM *****
139: REM *****
140: REM *****
141: REM *****
142: REM *****
143: REM *****
144: REM *****
145: REM *****
146: REM *****
147: REM *****
148: REM *****
149: REM *****
150: REM *****
151: REM *****
152: REM *****
153: REM *****
154: REM *****
155: REM *****
156: REM *****
157: REM *****
158: REM *****
159: REM *****
160: REM *****
161: REM *****
162: REM *****
163: REM *****
164: REM *****
165: REM *****
166: REM *****
167: REM *****
168: REM *****
169: REM *****
170: REM *****
171: REM *****
172: REM *****
173: REM *****
174: REM *****
175: REM *****
176: REM *****
177: REM *****
178: REM *****
179: REM *****
180: REM *****
181: REM *****
182: REM *****
183: REM *****
184: REM *****
185: REM *****
186: REM *****
187: REM *****
188: REM *****
189: REM *****
190: REM *****
191: REM *****
192: REM *****
193: REM *****
194: REM *****
195: REM *****
196: REM *****
197: REM *****
198: REM *****
199: REM *****
200: REM *****
201: REM *****
202: REM *****
203: REM *****
204: REM *****
205: REM *****
206: REM *****
207: REM *****
208: REM *****
209: REM *****
210: REM *****
211: REM *****
212: REM *****
213: REM *****
214: REM *****
215: REM *****
216: REM *****
217: REM *****
218: REM *****
219: REM *****
220: REM *****
221: REM *****
222: REM *****
223: REM *****
224: REM *****
225: REM *****
226: REM *****
227: REM *****
228: REM *****
229: REM *****
230: REM *****
231: REM *****
232: REM *****
233: REM *****
234: REM *****
235: REM *****
236: REM *****
237: REM *****
238: REM *****
239: REM *****
240: REM *****
241: REM *****
242: REM *****
243: REM *****
244: REM *****
245: REM *****
246: REM *****
247: REM *****
248: REM *****
249: REM *****
250: REM *****
251: REM *****
252: REM *****
253: REM *****
254: REM *****
255: REM *****
256: REM *****
257: REM *****
258: REM *****
259: REM *****
260: REM *****
261: REM *****
262: REM *****
263: REM *****
264: REM *****
265: REM *****
266: REM *****
267: REM *****
268: REM *****
269: REM *****
270: REM *****
271: REM *****
272: REM *****
273: REM *****
274: REM *****
275: REM *****
276: REM *****
277: REM *****
278: REM *****
279: REM *****
280: REM *****
281: REM *****
282: REM *****
283: REM *****
284: REM *****
285: REM *****
286: REM *****
287: REM *****
288: REM *****
289: REM *****
290: REM *****
291: REM *****
292: REM *****
293: REM *****
294: REM *****
295: REM *****
296: REM *****
297: REM *****
298: REM *****
299: REM *****
300: REM *****
301: REM *****
302: REM *****
303: REM *****
304: REM *****
305: REM *****
306: REM *****
307: REM *****
308: REM *****
309: REM *****
310: REM *****
311: REM *****
312: REM *****
313: REM *****
314: REM *****
315: REM *****
316: REM *****
317: REM *****
318: REM *****
319: REM *****
320: REM *****
321: REM *****
322: REM *****
323: REM *****
324: REM *****
325: REM *****
326: REM *****
327: REM *****
328: REM *****
329: REM *****
330: REM *****
331: REM *****
332: REM *****
333: REM *****
334: REM *****
335: REM *****
336: REM *****
337: REM *****
338: REM *****
339: REM *****
340: REM *****
341: REM *****
342: REM *****
343: REM *****
344: REM *****
345: REM *****
346: REM *****
347: REM *****
348: REM *****
349: REM *****
350: REM *****
351: REM *****
352: REM *****
353: REM *****
354: REM *****
355: REM *****
356: REM *****
357: REM *****
358: REM *****
359: REM *****
360: REM *****
361: REM *****
362: REM *****
363: REM *****
364: REM *****
365: REM *****
366: REM *****
367: REM *****
368: REM *****
369: REM *****
370: REM *****
371: REM *****
372: REM *****
373: REM *****
374: REM *****
375: REM *****
376: REM *****
377: REM *****
378: REM *****
379: REM *****
380: REM *****
381: REM *****
382: REM *****
383: REM *****
384: REM *****
385: REM *****
386: REM *****
387: REM *****
388: REM *****
389: REM *****
390: REM *****
391: REM *****
392: REM *****
393: REM *****
394: REM *****
395: REM *****
396: REM *****
397: REM *****
398: REM *****
399: REM *****
400: REM *****
401: REM *****
402: REM *****
403: REM *****
404: REM *****
405: REM *****
406: REM *****
407: REM *****
408: REM *****
409: REM *****
410: REM *****
411: REM *****
412: REM *****
413: REM *****
414: REM *****
415: REM *****
416: REM *****
417: REM *****
418: REM *****
419: REM *****
420: REM *****
421: REM *****
422: REM *****
423: REM *****
424: REM *****
425: REM *****
426: REM *****
427: REM *****
428: REM *****
429: REM *****
430: REM *****
431: REM *****
432: REM *****
433: REM *****
434: REM *****
435: REM *****
436: REM *****
437: REM *****
438: REM *****
439: REM *****
440: REM *****
441: REM *****
442: REM *****
443: REM *****
444: REM *****
445: REM *****
446: REM *****
447: REM *****
448: REM *****
449: REM *****
450: REM *****
451: REM *****
452: REM *****
453: REM *****
454: REM *****
455: REM *****
456: REM *****
457: REM *****
458: REM *****
459: REM *****
460: REM *****
461: REM *****
462: REM *****
463: REM *****
464: REM *****
465: REM *****
466: REM *****
467: REM *****
468: REM *****
469: REM *****
470: REM *****
471: REM *****
472: REM *****
473: REM *****
474: REM *****
475: REM *****
476: REM *****
477: REM *****
478: REM *****
479: REM *****
480: REM *****
481: REM *****
482: REM *****
483: REM *****
484: REM *****
485: REM *****
486: REM *****
487: REM *****
488: REM *****
489: REM *****
490: REM *****
491: REM *****
492: REM *****
493: REM *****
494: REM *****
495: REM *****
496: REM *****
497: REM *****
498: REM *****
499: REM *****
500: REM *****
501: REM *****
502: REM *****
503: REM *****
504: REM *****
505: REM *****
506: REM *****
507: REM *****
508: REM *****
509: REM *****
510: REM *****
511: REM *****
512: REM *****
513: REM *****
514: REM *****
515: REM *****
516: REM *****
517: REM *****
518: REM *****
519: REM *****
520: REM *****
521: REM *****
522: REM *****
523: REM *****
524: REM *****
525: REM *****
526: REM *****
527: REM *****
528: REM *****
529: REM *****
530: REM *****
531: REM *****
532: REM *****
533: REM *****
534: REM *****
535: REM *****
536: REM *****
537: REM *****
538: REM *****
539: REM *****
540: REM *****
541: REM *****
542: REM *****
543: REM *****
544: REM *****
545: REM *****
546: REM *****
547: REM *****
548: REM *****
549: REM *****
550: REM *****
551: REM *****
552: REM *****
553: REM *****
554: REM *****
555: REM *****
556: REM *****
557: REM *****
558: REM *****
559: REM *****
560: REM *****
561: REM *****
562: REM *****
563: REM *****
564: REM *****
565: REM *****
566: REM *****
567: REM *****
568: REM *****
569: REM *****
570: REM *****
571: REM *****
572: REM *****
573: REM *****
574: REM *****
575: REM *****
576: REM *****
577: REM *****
578: REM *****
579: REM *****
580: REM *****
581: REM *****
582: REM *****
583: REM *****
584: REM *****
585: REM *****
586: REM *****
587: REM *****
588: REM *****
589: REM *****
590: REM *****
591: REM *****
592: REM *****
593: REM *****
594: REM *****
595: REM *****
596: REM *****
597: REM *****
598: REM *****
599: REM *****
600: REM *****
601: REM *****
602: REM *****
603: REM *****
604: REM *****
605: REM *****
606: REM *****
607: REM *****
608: REM *****
609: REM *****
610: REM *****
611: REM *****
612: REM *****
613: REM *****
614: REM *****
615: REM *****
616: REM *****
617: REM *****
618: REM *****
619: REM *****
620: REM *****
621: REM *****
622: REM *****
623: REM *****
624: REM *****
625: REM *****
626: REM *****
627: REM *****
628: REM *****
629: REM *****
630: REM *****
631: REM *****
632: REM *****
633: REM *****
634: REM *****
635: REM *****
636: REM *****
637: REM *****
638: REM *****
639: REM *****
640: REM *****
641: REM *****
642: REM *****
643: REM *****
644: REM *****
645: REM *****
646: REM *****
647: REM *****
648: REM *****
649: REM *****
650: REM *****
651: REM *****
652: REM *****
653: REM *****
654: REM *****
655: REM *****
656: REM *****
657: REM *****
658: REM *****
659: REM *****
660: REM *****
661: REM *****
662: REM *****
663: REM *****
664: REM *****
665: REM *****
666: REM *****
667: REM *****
668: REM *****
669: REM *****
670: REM *****
671: REM *****
672: REM *****
673: REM *****
674: REM *****
675: REM *****
676: REM *****
677: REM *****
678: REM *****
679: REM *****
680: REM *****
681: REM *****
682: REM *****
683: REM *****
684: REM *****
685: REM *****
686: REM *****
687: REM *****
688: REM *****
689: REM *****
690: REM *****
691: REM *****
692: REM *****
693: REM *****
694: REM *****
695: REM *****
696: REM *****
697: REM *****
698: REM *****
699: REM *****
700: REM *****
701: REM *****
702: REM *****
703: REM *****
704: REM *****
705: REM *****
706: REM *****
707: REM *****
708: REM *****
709: REM *****
710: REM *****
711: REM *****
712: REM *****
713: REM *****
714: REM *****
715: REM *****
716: REM *****
717: REM *****
718: REM *****
719: REM *****
720: REM *****
721: REM *****
722: REM *****
723: REM *****
724: REM *****
725: REM *****
726: REM *****
727: REM *****
728: REM *****
729: REM *****
730: REM *****
731: REM *****
732: REM *****
733: REM *****
734: REM *****
735: REM *****
736: REM *****
737: REM *****
738: REM *****
739: REM *****
740: REM *****
741: REM *****
742: REM *****
743: REM *****
744: REM *****
745: REM *****
746: REM *****
747: REM *****
748: REM *****
749: REM *****
750: REM *****
751: REM *****
752: REM *****
753: REM *****
754: REM *****
755: REM *****
756: REM *****
757: REM *****
758: REM *****
759: REM *****
760: REM *****
761: REM *****
762: REM *****
763: REM *****
764: REM *****
765: REM *****
766: REM *****
767: REM *****
768: REM *****
769: REM *****
770: REM *****
771: REM *****
772: REM *****
773: REM *****
774: REM *****
775: REM *****
776: REM *****
777: REM *****
778: REM *****
779: REM *****
780: REM *****
781: REM *****
782: REM *****
783: REM *****
784: REM *****
785: REM *****
786: REM *****
787: REM *****
788: REM *****
789: REM *****
790: REM *****
791: REM *****
792: REM *****
793: REM *****
794: REM *****
795: REM *****
796: REM *****
797: REM *****
798: REM *****
799: REM *****
800: REM *****
801: REM *****
802: REM *****
803: REM *****
804: REM *****
805: REM *****
806: REM *****
807: REM *****
808: REM *****
809: REM *****
810: REM *****
811: REM *****
812: REM *****
813: REM *****
814: REM *****
815: REM *****
816: REM *****
817: REM *****
818: REM *****
819: REM *****
820: REM *****
821: REM *****
822: REM *****
823: REM *****
824: REM *****
825: REM *****
826: REM *****
827: REM *****
828: REM *****
829: REM *****
830: REM *****
831: REM *****
832: REM *****
833: REM *****
834: REM *****
835: REM *****
836: REM *****
837: REM *****
838: REM *****
839: REM *****
840: REM *****
841: REM *****
842: REM *****
843: REM *****
844: REM *****
845: REM *****
846: REM *****
847: REM *****
848: REM *****
849: REM *****
850: REM *****
851: REM *****
852: REM *****
853: REM *****
854: REM *****
855: REM *****
856: REM *****
857: REM *****
858: REM *****
859: REM *****
860: REM *****
861: REM *****
862: REM *****
863: REM *****
864: REM *****
865: REM *****
866: REM *****
867: REM *****
868: REM *****
869: REM *****
870: REM *****
871: REM *****
872: REM *****
873: REM *****
874: REM *****
875: REM *****
876: REM *****
877: REM *****
878: REM *****
879: REM *****
880: REM *****
881: REM *****
882: REM *****
883: REM *****
884: REM *****
885: REM *****
886: REM *****
887: REM *****
888: REM *****
889: REM *****
890: REM *****
891: REM *****
892: REM *****
893: REM *****
894: REM *****
895: REM *****
896: REM *****
897: REM *****
898: REM *****
899: REM *****
900: REM *****
901: REM *****
902: REM *****
903: REM *****
904: REM *****
905: REM *****
906: REM *****
907: REM *****
908: REM *****
909: REM *****
910: REM *****
911: REM *****
912: REM *****
913: REM *****
914: REM *****
915: REM *****
916: REM *****
917: REM *****
918: REM *****
919: REM *****
920: REM *****
921: REM *****
922: REM *****
923: REM *****
924: REM *****
925: REM *****
926: REM *****
927: REM *****
928: REM *****
929: REM *****
930: REM *****
931: REM *****
932: REM *****
933: REM *****
934: REM *****
935: REM *****
936: REM *****
937: REM *****
938: REM *****
939: REM *****
940: REM *****
941: REM *****
942: REM *****
943: REM *****
944: REM *****
945: REM *****
946: REM *****
947: REM *****
948: REM *****
949: REM *****
950: REM *****
951: REM *****
952: REM *****
953: REM *****
954: REM *****
955: REM *****
956: REM *****
957: REM *****
958: REM *****
959: REM *****
960: REM *****
961: REM *****
962: REM *****
963: REM *****
964: REM *****
965: REM *****
966: REM *****
967: REM *****
968: REM *****
969: REM *****
970: REM *****
971: REM *****
972: REM *****
973: REM *****
974: REM *****
975: REM *****
976: REM *****
977: REM *****
978: REM *****
979: REM *****
980: REM *****
981: REM *****
982: REM *****
983: REM *****
984: REM *****
985: REM *****
986: REM *****
987: REM *****
988: REM *****
989: REM *****
990: REM *****
991: REM *****
992: REM *****
993: REM *****
994: REM *****
995: REM *****
996: REM *****
997: REM *****
998: REM *****
999: REM *****
1000: REM *****

```

GUARDIAN - See also the table on the opposite page

need an upgrade to fit all of these extensions into memory...AAAAAHHHGGGGHHH!

AN EXCLUSIVE REVIEW

Here it is, the exclusive (well nearly) mini review of *Mayday Plus*, one of the first 32GB games to be released independently of Microsoft. *Mayday Plus* is a 1940s fighter pilot game written by that clever chap Aaron Rothberg of Shadow Software, the guys everywhere don't belt, and believe me if the program did not have "32GB" plastered all over the credits you would be forgiven in thinking Aaron is a assembly language whizz.

The game is quite large and comes on two disks so loading is a bit slow, although a nice digitized soundtrack and loading screen make up for that. Once you get through the fancy title cards and the vertically scrolling credits on a horizontally scrolling background you swap disks and are faced with a nice menu with various options including a demo mode and instructions. The interesting thing about the menu is that it leaves almost an empty and occasionally a place will do a fly past, it's things like this that turn an average program into something special.

After selecting the play game option the screen clears and the game begins. In *Mayday Plus* your plane, a terrific Spitfire, is viewed from the side and gives the game a Chopchopish look. Your first lesson is taking off, the spiffie uses the 'push up' to rotate clockwise method of maneuvering and I cracked while attempting my first take off! Once the controls are mastered (it soon becomes second nature) it's off to attempt your first mission, shoot down two enemy fighters attacking your runway. Your plane mimics the flight pattern of a Spitfire to a reasonably accurate degree, occasionally it will begin to lose speed and you will have to do a quick climb out dive if you do not want to stall. If you get downed during the daylight hours you cannot be killed by an ace hit, first individual options tell how you did you will have to make a landing to get repaired. Once the mission is completed you guide your plane back to base and land safely in a whole job in itself and you can given another mission. There are fifty six missions in all, daylight, bombing runs, trains to disable, there is even a railway tunnel to fly through, other features

DRAGON PUBLISHING • GUARDIAN LABS, INC.
Name: _____
Address: _____
City: _____ State: _____ Zip: _____

Address	City	State	Zip	City	State	Zip	City	State	Zip
0000	0000	0000	0000	0000	0000	0000	0000	0000	0000
0001	0000	0000	0000	0000	0000	0000	0000	0000	0000
0002	0000	0000	0000	0000	0000	0000	0000	0000	0000
0003	0000	0000	0000	0000	0000	0000	0000	0000	0000
0004	0000	0000	0000	0000	0000	0000	0000	0000	0000
0005	0000	0000	0000	0000	0000	0000	0000	0000	0000
0006	0000	0000	0000	0000	0000	0000	0000	0000	0000
0007	0000	0000	0000	0000	0000	0000	0000	0000	0000
0008	0000	0000	0000	0000	0000	0000	0000	0000	0000
0009	0000	0000	0000	0000	0000	0000	0000	0000	0000
0010	0000	0000	0000	0000	0000	0000	0000	0000	0000
0011	0000	0000	0000	0000	0000	0000	0000	0000	0000
0012	0000	0000	0000	0000	0000	0000	0000	0000	0000
0013	0000	0000	0000	0000	0000	0000	0000	0000	0000
0014	0000	0000	0000	0000	0000	0000	0000	0000	0000
0015	0000	0000	0000	0000	0000	0000	0000	0000	0000
0016	0000	0000	0000	0000	0000	0000	0000	0000	0000
0017	0000	0000	0000	0000	0000	0000	0000	0000	0000
0018	0000	0000	0000	0000	0000	0000	0000	0000	0000
0019	0000	0000	0000	0000	0000	0000	0000	0000	0000
0020	0000	0000	0000	0000	0000	0000	0000	0000	0000
0021	0000	0000	0000	0000	0000	0000	0000	0000	0000
0022	0000	0000	0000	0000	0000	0000	0000	0000	0000
0023	0000	0000	0000	0000	0000	0000	0000	0000	0000
0024	0000	0000	0000	0000	0000	0000	0000	0000	0000
0025	0000	0000	0000	0000	0000	0000	0000	0000	0000
0026	0000	0000	0000	0000	0000	0000	0000	0000	0000
0027	0000	0000	0000	0000	0000	0000	0000	0000	0000
0028	0000	0000	0000	0000	0000	0000	0000	0000	0000
0029	0000	0000	0000	0000	0000	0000	0000	0000	0000
0030	0000	0000	0000	0000	0000	0000	0000	0000	0000
0031	0000	0000	0000	0000	0000	0000	0000	0000	0000
0032	0000	0000	0000	0000	0000	0000	0000	0000	0000
0033	0000	0000	0000	0000	0000	0000	0000	0000	0000
0034	0000	0000	0000	0000	0000	0000	0000	0000	0000
0035	0000	0000	0000	0000	0000	0000	0000	0000	0000
0036	0000	0000	0000	0000	0000	0000	0000	0000	0000
0037	0000	0000	0000	0000	0000	0000	0000	0000	0000
0038	0000	0000	0000	0000	0000	0000	0000	0000	0000
0039	0000	0000	0000	0000	0000	0000	0000	0000	0000
0040	0000	0000	0000	0000	0000	0000	0000	0000	0000
0041	0000	0000	0000	0000	0000	0000	0000	0000	0000
0042	0000	0000	0000	0000	0000	0000	0000	0000	0000
0043	0000	0000	0000	0000	0000	0000	0000	0000	0000
0044	0000	0000	0000	0000	0000	0000	0000	0000	0000
0045	0000	0000	0000	0000	0000	0000	0000	0000	0000
0046	0000	0000	0000	0000	0000	0000	0000	0000	0000
0047	0000	0000	0000	0000	0000	0000	0000	0000	0000
0048	0000	0000	0000	0000	0000	0000	0000	0000	0000
0049	0000	0000	0000	0000	0000	0000	0000	0000	0000
0050	0000	0000	0000	0000	0000	0000	0000	0000	0000
0051	0000	0000	0000	0000	0000	0000	0000	0000	0000
0052	0000	0000	0000	0000	0000	0000	0000	0000	0000
0053	0000	0000	0000	0000	0000	0000	0000	0000	0000
0054	0000	0000	0000	0000	0000	0000	0000	0000	0000
0055	0000	0000	0000	0000	0000	0000	0000	0000	0000
0056	0000	0000	0000	0000	0000	0000	0000	0000	0000
0057	0000	0000	0000	0000	0000	0000	0000	0000	0000
0058	0000	0000	0000	0000	0000	0000	0000	0000	0000
0059	0000	0000	0000	0000	0000	0000	0000	0000	0000
0060	0000	0000	0000	0000	0000	0000	0000	0000	0000
0061	0000	0000	0000	0000	0000	0000	0000	0000	0000
0062	0000	0000	0000	0000	0000	0000	0000	0000	0000
0063	0000	0000	0000	0000	0000	0000	0000	0000	0000
0064	0000	0000	0000	0000	0000	0000	0000	0000	0000
0065	0000	0000	0000	0000	0000	0000	0000	0000	0000
0066	0000	0000	0000	0000	0000	0000	0000	0000	0000
0067	0000	0000	0000	0000	0000	0000	0000	0000	0000
0068	0000	0000	0000	0000	0000	0000	0000	0000	0000
0069	0000	0000	0000	0000	0000	0000	0000	0000	0000
0070	0000	0000	0000	0000	0000	0000	0000	0000	0000
0071	0000	0000	0000	0000	0000	0000	0000	0000	0000
0072	0000	0000	0000	0000	0000	0000	0000	0000	0000
0073	0000	0000	0000	0000	0000	0000	0000	0000	0000
0074	0000	0000	0000	0000	0000	0000	0000	0000	0000
0075	0000	0000	0000	0000	0000	0000	0000	0000	0000
0076	0000	0000	0000	0000	0000	0000	0000	0000	0000
0077	0000	0000	0000	0000	0000	0000	0000	0000	0000
0078	0000	0000	0000	0000	0000	0000	0000	0000	0000
0079	0000	0000	0000	0000	0000	0000	0000	0000	0000
0080	0000	0000	0000	0000	0000	0000	0000	0000	0000
0081	0000	0000	0000	0000	0000	0000	0000	0000	0000
0082	0000	0000	0000	0000	0000	0000	0000	0000	0000
0083	0000	0000	0000	0000	0000	0000	0000	0000	0000
0084	0000	0000	0000	0000	0000	0000	0000	0000	0000
0085	0000	0000	0000	0000	0000	0000	0000	0000	0000
0086	0000	0000	0000	0000	0000	0000	0000	0000	0000
0087	0000	0000	0000	0000	0000	0000	0000	0000	0000
0088	0000	0000	0000	0000	0000	0000	0000	0000	0000
0089	0000	0000	0000	0000	0000	0000	0000	0000	0000
0090	0000	0000	0000	0000	0000	0000	0000	0000	0000
0091	0000	0000	0000	0000	0000	0000	0000	0000	0000
0092	0000	0000	0000	0000	0000	0000	0000	0000	0000
0093	0000	0000	0000	0000	0000	0000	0000	0000	0000
0094	0000	0000	0000	0000	0000	0000	0000	0000	0000
0095	0000	0000	0000	0000	0000	0000	0000	0000	0000
0096	0000	0000	0000	0000	0000	0000	0000	0000	0000
0097	0000	0000	0000	0000	0000	0000	0000	0000	0000
0098	0000	0000	0000	0000	0000	0000	0000	0000	0000
0099	0000	0000	0000	0000	0000	0000	0000	0000	0000

End of table

- your STOS backup disk.
- 2) Enter **TABLE 1** and save it as **CLAMP-DRAM.MBR**.
- 3) Type in **PROGRAM 1** and then type **CLAMP-CLAMPDAM.MBR** and the sprites will automatically load into their correct bank.
- 4) Restore the program.
- 5) Run it.

HOW IT WORKS

LINES 40 is a standard "clear the screen" line that should be used in most programs.

LINES 50 reserves a temporary screen which will be used to plot the sprites invisibly before transferring them to the screen.

LINES 60 clears the screen.

LINES 70-90 are the variables for the initial positions of the player (X,Y), the guardian (GXN, GYN), and the first (FX1, FY1).

LINES 110-130 tell STOS to use sprites 1 and 2 as the electric shocks, where to move them around the screen, and finally how they should be animated.

LINES 140-170 plot the sprites in their initial positions on screen 2 (invisible to the player), the screen is then swapped with the one that is being displayed and the sprites appear invisibly with no flicker.

LINES 180 create the internal timer.

LINES 210-240 read the joystick and increment or decrement the variables holding the players position by -1 or +1.

LINES 250-290 if the player moves left then move the guardian left, if the player moves right move the guardian right only the guardian moves one pixel further than the player with each move.

LINES 310-330 if the player goes off the right of the screen move it onto the left hand side, if up then make it appear at the bottom etc.

LINES 340-370 prints the sprites in their new positions on the invisible (LOGO) screen 2 and then swaps it with the screen being shown.

LINES 390 tests to see if anything has collided with the 1-pixel border around the player and puts its value into the variable **BLT**.

LINES 400 tests to see if the fruit has been hit. If so the fruit is moved to another position and the score is incremented.

LINES 420 repeats the whole thing until the player hits something nasty or the timer reaches 1000.

LINES 430 decides whether the player ran out of time or got killed and prints an appropriate message.

LINES 440 prints the score.

The way Canadian was programmed certainly wasn't very efficient but STOS is so fast my coding does not have to be perfect. There are so many different ways to get

good fast smooth animation in STOS and that was just one example, perhaps you could provide some more?

AND AN INPUT ROUTINE

How you ever used a really good program written in some language or another only to find it has been let down by the way data is input, you know the sort of thing is question mark on the screen and if you press values without typing anything it throws you out of the program with a nasty error. If you do not want that to happen to your programs then look no further, Pete is the rescue.

The second and last program for this issue is a user definable input routine, it's especially useful for educational software (check out *Treasure Search*). Go type in **PROGRAM 2**.

HOW IT WORKS

LINES 100 are clear the screen (remember?)

LINES 110-120 set up the variables needed for the routine.

LINES 130 asks for your name.

LINES 140 calls the routine. The input data is returned in the string **INP\$**.

LINES 150-160 works out where to place the text and prints it there. It would have been easier to use **CNTR\$** **YELLO\$** **YGRN\$**.

LINES 6000-6050 moves to where you want the text to go and clears a space for it.

LINES 6100-6150 print the name and makes sure the key being pressed is an alphanumeric. If you wanted to extend the range of characters allowed you would have to change line 6120.

LINES 6160 handles the delete key.

LINES 6160 keeps reading until the return key is pressed AND something has been typed.

LINES 6180 clears the screen of the input **LINES 6260-6300** read the keyboard and something is pressed, the value of that key is then stored in the variables **SCANPRESS** and **PR\$X\$Y\$Z**.

PROGRAMS WANTED

I still want your STOS programs for the P.D. library and would like to include in the columns, but don't forget to include an L.A.E. where you send me your disk either. What it could be quite a while before you get them back. By the time you read this there should be quite a few new STOS public domain disks in the **PAGE 5** library, including a disk with all the STOS programs from issues 19-40-41 and an educational disk with software called *Treasure*

Search (by me) and *Multiwin* (by Jim Penhew) on it. Write to Page 5 Publishing for full details.

A CHALLENGE

Challenge time, hands up all those people who think they can write a small assembly language program that will change the value of a colour register several times a second to give the impression of loads of scrolling colours on screen (a bit like the old Atari rainbow effect on the 8-bit). First person to send me such a program will receive a collection of STOS public domain programs. Oh and it must be possible to pass the number (0-15) of the colour you wish to randomise to the routine.

That's about it from me this issue, and if you are wondering what happened to the PC show this is it - NOTHING! Mondrian were not there (and I don't blame them, it was a dead boring). My thanks go to Chris Preece and Aaron Fothergill for being all round nice choppers and getting all the stuff to me before New Atari User's deadline. Next time I want to start presenting shorter routines that people can include in their own programs, things like timer input routines, graphical effects, sound effects, anything reasonably small that can be used to just up a program, so if you have any programs like that send them to me at the address below.

SEYMOUR PLUS is available for £21.95 from SHARROW SOFTWARE, 1 GOWER ROAD, WINDEN HALL, BARNETLEY, NORTH 801-054, 012 3554.

Anyone wishing to join the **STOS CLUB** should make me a cheque or postal order for £10 payable to Aaron Fothergill (STOS CLUB) and should send it to the above address remembering to mark the envelope **STOS CLUB**.

Write to Peter Hickman at 36 CLEVERLY ESTATE, WORMHOLT ROAD, LONDON W12 0LX

STOS FROM PAGE 6

There will be at least four new STOS disks added to the **PAGE 5** LIBRARY this issue including a disk of all the programs published so far to the STOS column and Peter Hickman's educational program *Treasure Search*. If you do not already receive our catalogue update please write or telephone us on 0185 310038 and ask for a copy which will give you full details of these and other disks.

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 42 £1.75
February/March

XL/XE

MULTI MOUSE

Full control
for your programs

TURBO BASIC
full command list

CHEATING AT CASSETTE GAMES!

OUR PROGRAM DOES IT FOR YOU!

ST FILE



STOS - GREAT PROGRAMMING
COMPETITION -over £200 worth of prizes!

MAKING MUSIC - The layman's guide
HAWAIIAN ODYSSEY - Sublogic's latest
NEODESK - What GEM should have been

STOS

COLUMN

A super new programming competition with over £200 worth of prizes!

A new input routine

News of upcoming products

A type-in light synthesiser

Since the last time you may have noticed that quite a few new STOS products have been noticed, some of which may be reviewed elsewhere in this issue. To mark the launch of these products I am proud to announce, in conjunction with Shadow Software (makers of *Skystrike Plus*) and Mandarin Software (you know who they are don't you?), a competition which could mean fame and fortune (well, fame anyway) for one of many lucky readers.

To become rich and famous all you have to do is recreate a classic 8-bit game, the only stipulation being that you use STOS to write the clone. The **FIRST PRIZE** is a pot on the back from me and what could be called a STOS programmers pack, which includes: **STOS MUSKIEAN MATHS PUZZ**, **THE COMPILER**, **SPRITES 608**, **THE TOTAL MAP EDITOR** (DIME), and **DRINK OFFICE PRODS**. **SECOND PRIZE** is a copy of **ARMED & DANGEROUS**, **SKYSTRIKE PLUS**, **LANCLOT**, **TIME & MAGIC** and **MACHINOS** (not the Plus version). Finally **THIRD PRIZE** is a guess to month education and consists of the **THREE FUN SCHOOLS 2** PACKAGES (under 6's, 6-8's and over 8's). Hopefully who-ever will get a copy of my STOS public domain educational program called **Treasure Islands** which features digitised speech, high quality graphics and a very strange pair of feet.

After the competition is over all games entered will be put into the Page 6 and STOS Club public domain libraries, this will allow other STOS users to study and enjoy them. If any of the games are considered to be so outstanding that they wipe the floor clean with the 8-bit game they are trying to emulate then is the possibility that they could be marketed by Mandarin or Shadow Software so if you want to see your name on computer screens all over the globe get programming now and send your entries to me at the usual address (at the end of this article), and don't forget to include your name, address,

telephone number (if you have one), any particular requirements the program has (I mean memory, two disk drives, three eyed geese space alien sitting on the moon, etc.) and finally please tell us what the game was called in it's 8-bit form.

All entries will be judged by myself and representatives from the companies supplying the prize's. The **closing date** is **APRIL 1985** as you have **THREE MONTHS** to come up with an 8-bit clone clone and remember it doesn't matter how good the game is, if it's late your entry will get buried at the bottom of my filing cabinet and won't surface until I clean it out! Obviously if some cosmic catastrophe occurs the prize list may be subject to (very) minor alterations, but if all goes well some lucky person is going to have a very large parcel plinking itself on their doorstep some time in May.

Just in case you are a first time computer user and you haven't the slightest idea what I'm talking about when I refer to 8-bit clones (I hope you enjoyed your holiday on Island) I'll give you some idea's. My personal favourite 8-bit game is *Mr Do* (that don't let that throw you because I'm not the only judge!) but there are also *Space Invaders*, *Pacman*, *Mario Miller* (an old Spectrum game), *Reveris*, *Intolite* *Continental*, *Asteroids*, *Silver Wolf*, *Lode Runner*, *Jeopardy* and a myriad of others. Remember, we the judges are not looking for innovation and originality, just a good old fashioned blast from the past rewritten in STOS.

BUTTER ON THE AMIGA?

Big news, *Amigos* (the Amiga version of STOS) should be in the shops any day now. I have had the privilege of following it's development (thanks Richard) from a mere word processor mock-up to it's current state which (in my humble opinion) makes STOS (or any other version of BASIC) look antiquated and useless. It has the raw power and speed of Assembly language and combines it with the elegance and simplicity of BASIC. I will do a page long overview of the whole package in the next issue. Why? I hear you ask. Well, because *Amigos* will be the foundation for a new version of STOS (previously called

STOS PLATO) that should be ready by the end of this year, although in the constantly changing world of computers this date may be a little optimistic. I leave it up to Francois Loret and the rest of the development team to prove me wrong (please).

THE SHOPPER SHOW

This column, as being written just after the Computer Shopper Show finished in London last November (all contributors to the magazine have to head in their costumes and programs well before publication), if you could not make it to this remarkable event I'll tell you what you missed, just about everybody involved with STOS turned up, so you could have chatted to Aaron Ashenoff (author of *Arctura* (Pico) and *PCAMES*), Adam Vollenpelt (Aaron's brother who draws all the graphics for Shadow Software's products), Stephen Hill (author of the STOS manual and the new STOS book for advanced users), Simon Cook (author of the winning entry in Mandarin's STOS competition), Richard Yarnier and Christopher Payne (Mandarin's *Keyhole* editors), Sandra Shockey (Simon's foster sister and organizer of the STOS public domain library) and of course me.

Richard Yarnier spent most of the day demonstrating various new STOS products the most interesting of which was STOS Visi (watch this space for a review) which could be seen digitizing scenes from the film *TRON* in real time using a bit line program. Simon Cook brought along the very latest version of *Cotton Capers*, the one or two player text run up structured just like a classic cartoon involving a cat and dog fighting it out in front of wonderfully colorful backdrops, the graphics are really cute but Simon assumes me the cat/dog draw that well if I wish I couldn't draw that well). The game contains some excellent speech (so should that be *Simian*?) and should (hopefully) be in your shops soon about now. The interesting thing about *Cotton Capers* is that Mandarin's cat handling it with a new STOS extension that allows answers to read BOTH joystick ports (rather than one mouse, one joystick). Sandra Shockey supplied me with

some new STOS public domain software including another upgrade that maintains compatibility with the new version of STOS (the the TTY) that is about to be released, check out the Page 6 library for the very latest word in all public domain software.

SOLVING SOME SOUND PROBLEMS

Wakeup all of you who have had problems playing S&L Music samples in your compiled programs, ready isn't it? The solution is quite simple and relatively painless, just follow these simple instructions:

- 1) Boot the backup of your STOS language disk.
- 2) Insert the backup of your Music disk and load the program called "INSTALL.BAT"
- 3) Type `FORN:START(1)=H:POA`
- 4) Save the corrected copy of "INSTALL.BAT" onto your Music backup disk.
- 5) Run the program and reinserted the Music extension onto your language and compiler disks.

You should now be able to compile programs using these samples without those wonderful hums appearing when you run them.

MUSIC WHILE YOU LOAD

Have you ever wanted to play interrupt driven music to keep the player amused while loading the next part of your latest mega game? The secret is in how you manipulate STOS commands, the interrupt music system is programmed to stop when executing some of the STOS commands so these must be either executed before you start your music or just avoided altogether. The commands to avoid are `LOAD`, `RE`, `MOVE`, and `BASE` all of which cause STOS to shift memory about. As if the `LOAD` command is amongst those you cannot use how do you read files from disk whilst playing music? Easy, just use this command to save the banks you wish to load

`BLANK "bankname.bank", START (name) to START(name)+length(name)`

where "bank" is the bank number and "bankname.bank" is the filename of the bank. To incorporate these blocks of memory bank into your programs you must first reserve space for them at the beginning of the program, then to load them while the music plays use

`BLANK "bankname.bank", START(name)`

continued overleaf

```

10 OPEN "ST" : DATA "ST" : DATA "S" : OPEN "ST" : DATA "S"
20 OPEN "S" : DATA "LOADING BANK AND MUSIC"
30 OPEN "bankname.bank"
40 OPEN "bankname.bank"
50 OPEN:START(1) : DATA "ST" : OPEN "ST" : DATA "S"
60 OPEN:START "S" : DATA "ST" : OPEN:START "S" : DATA "ST" : DATA "S"
70 OPEN "S" : DATA "ST" : OPEN "ST" : DATA "S"
80 OPEN "S" : DATA "ST" : OPEN "ST" : DATA "S"
90 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
100 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
110 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
120 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
130 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
140 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
150 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
160 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
170 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
180 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
190 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
200 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
210 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
220 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
230 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
240 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
250 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
260 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
270 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
280 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
290 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
300 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
310 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
320 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
330 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
340 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
350 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
360 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
370 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
380 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
390 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
400 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
410 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
420 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
430 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
440 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
450 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
460 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
470 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
480 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
490 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
500 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
510 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
520 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
530 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
540 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
550 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
560 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
570 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
580 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
590 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
600 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
610 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
620 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
630 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
640 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
650 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
660 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
670 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
680 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
690 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
700 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
710 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
720 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
730 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
740 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
750 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
760 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
770 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
780 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
790 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
800 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
810 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
820 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
830 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
840 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
850 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
860 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
870 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
880 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
890 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
900 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
910 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
920 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
930 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
940 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
950 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
960 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
970 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
980 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
990 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"
1000 OPEN "ST" : DATA "ST" : OPEN "ST" : DATA "S"

```

Music while you load - simply and quickly!

If I have lost you during that explanation type in Program 1 following these instructions:

- 1) Format a blank disk and use CDM to copy two memory banks from your accessories backup disk called "MUSIC.BANK" and "SOUNDAL.BANK".
- 2) Load your STOS backup disk.
- 3) Type in PROGRAM 1 and save it to the disk with the copied accessories on it.
- 4) Run the program, watch the drive light and listen.

HOW IT WORKS

LINES 10-30 clear the screen and print a message to tell you what is happening.

LINES 30-60 load the music and split banks into memory.

LINES 60-66 place the length of the split bank into the variable "LEN" and then reserves a databank that will be used to contain the reserved spites.

LINE 70 starts up the music.

LINES 66-90 print a message and then starts to save the split bank using the "SAVE" command.

LINES 100-110 print a message and then loads the saved data into bank 0, all while the music plays.

It is quite possible to save spites, music, screens, even digitised sound in this manner, it's easy and it allows you to have music playing along while they load. Isn't STOS great?

PROCEDURES?

I started programming in BASIC when ZIMM's name the ruler but in the past five years I have been using PROCSL on IBM (which puts results out with except compatibility, the beauty of PASCAL) is that it allows the programmer to construct procedures of often used routines that can be saved and included with the main program when it is compiled. Any procedure could be then executed by typing it's name. STOS does not have procedures, but it does have sub-routines which can do a similar job. In the last issue I presented a replacement input routine for you to use and this issue's useful sub-routine is a little window routine that uses the mouse to select one of two possible screens. (In my example, PROG-RAM 2, I have chosen T0 or T00. It's quite simple to use, all you do is include lines 5000-5100 in your own programs, put your choices in the variables PARAM11 and PARAM12 and put your questions in the variables PARAM15 and PARAM16, there is a COSAR SCREEN.

```

1 REM ***** WINDOW BY P.J. LINDEN *****
2 DIM T0, T00, T01, T02, T03, T04, T05, T06, T07, T08, T09, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37, T38, T39, T40, T41, T42, T43, T44, T45, T46, T47, T48, T49, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T60, T61, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75, T76, T77, T78, T79, T80, T81, T82, T83, T84, T85, T86, T87, T88, T89, T90, T91, T92, T93, T94, T95, T96, T97, T98, T99, T100, T101, T102, T103, T104, T105, T106, T107, T108, T109, T110, T111, T112, T113, T114, T115, T116, T117, T118, T119, T120, T121, T122, T123, T124, T125, T126, T127, T128, T129, T130, T131, T132, T133, T134, T135, T136, T137, T138, T139, T140, T141, T142, T143, T144, T145, T146, T147, T148, T149, T150, T151, T152, T153, T154, T155, T156, T157, T158, T159, T160, T161, T162, T163, T164, T165, T166, T167, T168, T169, T170, T171, T172, T173, T174, T175, T176, T177, T178, T179, T180, T181, T182, T183, T184, T185, T186, T187, T188, T189, T190, T191, T192, T193, T194, T195, T196, T197, T198, T199, T200, T201, T202, T203, T204, T205, T206, T207, T208, T209, T210, T211, T212, T213, T214, T215, T216, T217, T218, T219, T220, T221, T222, T223, T224, T225, T226, T227, T228, T229, T230, T231, T232, T233, T234, T235, T236, T237, T238, T239, T240, T241, T242, T243, T244, T245, T246, T247, T248, T249, T250, T251, T252, T253, T254, T255, T256, T257, T258, T259, T260, T261, T262, T263, T264, T265, T266, T267, T268, T269, T270, T271, T272, T273, T274, T275, T276, T277, T278, T279, T280, T281, T282, T283, T284, T285, T286, T287, T288, T289, T290, T291, T292, T293, T294, T295, T296, T297, T298, T299, T300, T301, T302, T303, T304, T305, T306, T307, T308, T309, T310, T311, T312, T313, T314, T315, T316, T317, T318, T319, T320, T321, T322, T323, T324, T325, T326, T327, T328, T329, T330, T331, T332, T333, T334, T335, T336, T337, T338, T339, T340, T341, T342, T343, T344, T345, T346, T347, T348, T349, T350, T351, T352, T353, T354, T355, T356, T357, T358, T359, T360, T361, T362, T363, T364, T365, T366, T367, T368, T369, T370, T371, T372, T373, T374, T375, T376, T377, T378, T379, T380, T381, T382, T383, T384, T385, T386, T387, T388, T389, T390, T391, T392, T393, T394, T395, T396, T397, T398, T399, T400, T401, T402, T403, T404, T405, T406, T407, T408, T409, T410, T411, T412, T413, T414, T415, T416, T417, T418, T419, T420, T421, T422, T423, T424, T425, T426, T427, T428, T429, T430, T431, T432, T433, T434, T435, T436, T437, T438, T439, T440, T441, T442, T443, T444, T445, T446, T447, T448, T449, T450, T451, T452, T453, T454, T455, T456, T457, T458, T459, T460, T461, T462, T463, T464, T465, T466, T467, T468, T469, T470, T471, T472, T473, T474, T475, T476, T477, T478, T479, T480, T481, T482, T483, T484, T485, T486, T487, T488, T489, T490, T491, T492, T493, T494, T495, T496, T497, T498, T499, T500, T501, T502, T503, T504, T505, T506, T507, T508, T509, T510, T511, T512, T513, T514, T515, T516, T517, T518, T519, T520, T521, T522, T523, T524, T525, T526, T527, T528, T529, T530, T531, T532, T533, T534, T535, T536, T537, T538, T539, T540, T541, T542, T543, T544, T545, T546, T547, T548, T549, T550, T551, T552, T553, T554, T555, T556, T557, T558, T559, T560, T561, T562, T563, T564, T565, T566, T567, T568, T569, T570, T571, T572, T573, T574, T575, T576, T577, T578, T579, T580, T581, T582, T583, T584, T585, T586, T587, T588, T589, T590, T591, T592, T593, T594, T595, T596, T597, T598, T599, T600, T601, T602, T603, T604, T605, T606, T607, T608, T609, T610, T611, T612, T613, T614, T615, T616, T617, T618, T619, T620, T621, T622, T623, T624, T625, T626, T627, T628, T629, T630, T631, T632, T633, T634, T635, T636, T637, T638, T639, T640, T641, T642, T643, T644, T645, T646, T647, T648, T649, T650, T651, T652, T653, T654, T655, T656, T657, T658, T659, T660, T661, T662, T663, T664, T665, T666, T667, T668, T669, T670, T671, T672, T673, T674, T675, T676, T677, T678, T679, T680, T681, T682, T683, T684, T685, T686, T687, T688, T689, T690, T691, T692, T693, T694, T695, T696, T697, T698, T699, T700, T701, T702, T703, T704, T705, T706, T707, T708, T709, T710, T711, T712, T713, T714, T715, T716, T717, T718, T719, T720, T721, T722, T723, T724, T725, T726, T727, T728, T729, T730, T731, T732, T733, T734, T735, T736, T737, T738, T739, T740, T741, T742, T743, T744, T745, T746, T747, T748, T749, T750, T751, T752, T753, T754, T755, T756, T757, T758, T759, T760, T761, T762, T763, T764, T765, T766, T767, T768, T769, T770, T771, T772, T773, T774, T775, T776, T777, T778, T779, T780, T781, T782, T783, T784, T785, T786, T787, T788, T789, T790, T791, T792, T793, T794, T795, T796, T797, T798, T799, T800, T801, T802, T803, T804, T805, T806, T807, T808, T809, T810, T811, T812, T813, T814, T815, T816, T817, T818, T819, T820, T821, T822, T823, T824, T825, T826, T827, T828, T829, T830, T831, T832, T833, T834, T835, T836, T837, T838, T839, T840, T841, T842, T843, T844, T845, T846, T847, T848, T849, T850, T851, T852, T853, T854, T855, T856, T857, T858, T859, T860, T861, T862, T863, T864, T865, T866, T867, T868, T869, T870, T871, T872, T873, T874, T875, T876, T877, T878, T879, T880, T881, T882, T883, T884, T885, T886, T887, T888, T889, T890, T891, T892, T893, T894, T895, T896, T897, T898, T899, T900, T901, T902, T903, T904, T905, T906, T907, T908, T909, T910, T911, T912, T913, T914, T915, T916, T917, T918, T919, T920, T921, T922, T923, T924, T925, T926, T927, T928, T929, T930, T931, T932, T933, T934, T935, T936, T937, T938, T939, T940, T941, T942, T943, T944, T945, T946, T947, T948, T949, T950, T951, T952, T953, T954, T955, T956, T957, T958, T959, T960, T961, T962, T963, T964, T965, T966, T967, T968, T969, T970, T971, T972, T973, T974, T975, T976, T977, T978, T979, T980, T981, T982, T983, T984, T985, T986, T987, T988, T989, T990, T991, T992, T993, T994, T995, T996, T997, T998, T999, T1000.
3 REM ***** WINDOW BY P.J. LINDEN *****
4 DIM T0, T00, T01, T02, T03, T04, T05, T06, T07, T08, T09, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37, T38, T39, T40, T41, T42, T43, T44, T45, T46, T47, T48, T49, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T60, T61, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75, T76, T77, T78, T79, T80, T81, T82, T83, T84, T85, T86, T87, T88, T89, T90, T91, T92, T93, T94, T95, T96, T97, T98, T99, T100, T101, T102, T103, T104, T105, T106, T107, T108, T109, T110, T111, T112, T113, T114, T115, T116, T117, T118, T119, T120, T121, T122, T123, T124, T125, T126, T127, T128, T129, T130, T131, T132, T133, T134, T135, T136, T137, T138, T139, T140, T141, T142, T143, T144, T145, T146, T147, T148, T149, T150, T151, T152, T153, T154, T155, T156, T157, T158, T159, T160, T161, T162, T163, T164, T165, T166, T167, T168, T169, T170, T171, T172, T173, T174, T175, T176, T177, T178, T179, T180, T181, T182, T183, T184, T185, T186, T187, T188, T189, T190, T191, T192, T193, T194, T195, T196, T197, T198, T199, T200, T201, T202, T203, T204, T205, T206, T207, T208, T209, T210, T211, T212, T213, T214, T215, T216, T217, T218, T219, T220, T221, T222, T223, T224, T225, T226, T227, T228, T229, T230, T231, T232, T233, T234, T235, T236, T237, T238, T239, T240, T241, T242, T243, T244, T245, T246, T247, T248, T249, T250, T251, T252, T253, T254, T255, T256, T257, T258, T259, T260, T261, T262, T263, T264, T265, T266, T267, T268, T269, T270, T271, T272, T273, T274, T275, T276, T277, T278, T279, T280, T281, T282, T283, T284, T285, T286, T287, T288, T289, T290, T291, T292, T293, T294, T295, T296, T297, T298, T299, T300, T301, T302, T303, T304, T305, T306, T307, T308, T309, T310, T311, T312, T313, T314, T315, T316, T317, T318, T319, T320, T321, T322, T323, T324, T325, T326, T327, T328, T329, T330, T331, T332, T333, T334, T335, T336, T337, T338, T339, T340, T341, T342, T343, T344, T345, T346, T347, T348, T349, T350, T351, T352, T353, T354, T355, T356, T357, T358, T359, T360, T361, T362, T363, T364, T365, T366, T367, T368, T369, T370, T371, T372, T373, T374, T375, T376, T377, T378, T379, T380, T381, T382, T383, T384, T385, T386, T387, T388, T389, T390, T391, T392, T393, T394, T395, T396, T397, T398, T399, T400, T401, T402, T403, T404, T405, T406, T407, T408, T409, T410, T411, T412, T413, T414, T415, T416, T417, T418, T419, T420, T421, T422, T423, T424, T425, T426, T427, T428, T429, T430, T431, T432, T433, T434, T435, T436, T437, T438, T439, T440, T441, T442, T443, T444, T445, T446, T447, T448, T449, T450, T451, T452, T453, T454, T455, T456, T457, T458, T459, T460, T461, T462, T463, T464, T465, T466, T467, T468, T469, T470, T471, T472, T473, T474, T475, T476, T477, T478, T479, T480, T481, T482, T483, T484, T485, T486, T487, T488, T489, T490, T491, T492, T493, T494, T495, T496, T497, T498, T499, T500, T501, T502, T503, T504, T505, T506, T507, T508, T509, T510, T511, T512, T513, T514, T515, T516, T517, T518, T519, T520, T521, T522, T523, T524, T525, T526, T527, T528, T529, T530, T531, T532, T533, T534, T535, T536, T537, T538, T539, T540, T541, T542, T543, T544, T545, T546, T547, T548, T549, T550, T551, T552, T553, T554, T555, T556, T557, T558, T559, T560, T561, T562, T563, T564, T565, T566, T567, T568, T569, T570, T571, T572, T573, T574, T575, T576, T577, T578, T579, T580, T581, T582, T583, T584, T585, T586, T587, T588, T589, T590, T591, T592, T593, T594, T595, T596, T597, T598, T599, T600, T601, T602, T603, T604, T605, T606, T607, T608, T609, T610, T611, T612, T613, T614, T615, T616, T617, T618, T619, T620, T621, T622, T623, T624, T625, T626, T627, T628, T629, T630, T631, T632, T633, T634, T635, T636, T637, T638, T639, T640, T641, T642, T643, T644, T645, T646, T647, T648, T649, T650, T651, T652, T653, T654, T655, T656, T657, T658, T659, T660, T661, T662, T663, T664, T665, T666, T667, T668, T669, T670, T671, T672, T673, T674, T675, T676, T677, T678, T679, T680, T681, T682, T683, T684, T685, T686, T687, T688, T689, T690, T691, T692, T693, T694, T695, T696, T697, T698, T699, T700, T701, T702, T703, T704, T705, T706, T707, T708, T709, T710, T711, T712, T713, T714, T715, T716, T717, T718, T719, T720, T721, T722, T723, T724, T725, T726, T727, T728, T729, T730, T731, T732, T733, T734, T735, T736, T737, T738, T739, T740, T741, T742, T743, T744, T745, T746, T747, T748, T749, T750, T751, T752, T753, T754, T755, T756, T757, T758, T759, T760, T761, T762, T763, T764, T765, T766, T767, T768, T769, T770, T771, T772, T773, T774, T775, T776, T777, T778, T779, T780, T781, T782, T783, T784, T785, T786, T787, T788, T789, T790, T791, T792, T793, T794, T795, T796, T797, T798, T799, T800, T801, T802, T803, T804, T805, T806, T807, T808, T809, T810, T811, T812, T813, T814, T815, T816, T817, T818, T819, T820, T821, T822, T823, T824, T825, T826, T827, T828, T829, T830, T831, T832, T833, T834, T835, T836, T837, T838, T839, T840, T841, T842, T843, T844, T845, T846, T847, T848, T849, T850, T851, T852, T853, T854, T855, T856, T857, T858, T859, T860, T861, T862, T863, T864, T865, T866, T867, T868, T869, T870, T871, T872, T873, T874, T875, T876, T877, T878, T879, T880, T881, T882, T883, T884, T885, T886, T887, T888, T889, T890, T891, T892, T893, T894, T895, T896, T897, T898, T899, T900, T901, T902, T903, T904, T905, T906, T907, T908, T909, T910, T911, T912, T913, T914, T915, T916, T917, T918, T919, T920, T921, T922, T923, T924, T925, T926, T927, T928, T929, T930, T931, T932, T933, T934, T935, T936, T937, T938, T939, T940, T941, T942, T943, T944, T945, T946, T947, T948, T949, T950, T951, T952, T953, T954, T955, T956, T957, T958, T959, T960, T961, T962, T963, T964, T965, T966, T967, T968, T969, T970, T971, T972, T973, T974, T975, T976, T977, T978, T979, T980, T981, T982, T983, T984, T985, T986, T987, T988, T989, T990, T991, T992, T993, T994, T995, T996, T997, T998, T999, T1000.
5 REM ***** WINDOW BY P.J. LINDEN *****
6 DIM T0, T00, T01, T02, T03, T04, T05, T06, T07, T08, T09, T10, T11, T12, T13, T14, T15, T16, T17, T18, T19, T20, T21, T22, T23, T24, T25, T26, T27, T28, T29, T30, T31, T32, T33, T34, T35, T36, T37, T38, T39, T40, T41, T42, T43, T44, T45, T46, T47, T48, T49, T50, T51, T52, T53, T54, T55, T56, T57, T58, T59, T60, T61, T62, T63, T64, T65, T66, T67, T68, T69, T70, T71, T72, T73, T74, T75, T76, T77, T78, T79, T80, T81, T82, T83, T84, T85, T86, T87, T88, T89, T90, T91, T92, T93, T94, T95, T96, T97, T98, T99, T100, T101, T102, T103, T104, T105, T106, T107, T108, T109, T110, T111, T112, T113, T114, T115, T116, T117, T118, T119, T120, T121, T122, T123, T124, T125, T126, T127, T128, T129, T130, T131, T132, T133, T134, T135, T136, T137, T138, T139, T140, T141, T142, T143, T144, T145, T146, T147, T148, T149, T150, T151, T152, T153, T154, T155, T156, T157, T158, T159, T160, T161, T162, T163, T164, T165, T166, T167, T168, T169, T170, T171, T172, T173, T174, T175, T176, T177, T178, T179, T180, T181, T182, T183, T184, T185, T186, T187, T188, T189, T190, T191, T192, T193, T194, T195, T196, T197, T198, T199, T200, T201, T202, T203, T204, T205, T206, T207, T208, T209, T210, T211, T212, T213, T214, T215, T216, T217, T218, T219, T220, T221, T222, T223, T224, T225, T226, T227, T228, T229, T230, T231, T232, T233, T234, T235, T236, T237, T238, T239, T240, T241, T242, T243, T244, T245, T246, T247, T248, T249, T250, T251, T252, T253, T254, T255, T256, T257, T258, T259, T260, T261, T262, T263, T264, T265, T266, T267, T268, T269, T270, T271, T272, T273, T274, T275, T276, T277, T278, T279, T280, T281, T282, T283, T284, T285, T286, T287, T288, T289, T290, T291, T292, T293, T294, T295, T296, T297, T298, T299, T300, T301, T302, T303, T304, T305, T306, T307, T308, T309, T310, T311, T312, T313, T314, T315, T316, T317, T
```

LINKS 199-619 make up the subfunction which changes the colour palette, play about with the values to produce your favourite colour scheme.

DATE _____ TIME _____

Just a quick reminder, before I go, about the \$10K CLUB. If you wish to join, it costs \$10 for us to monthly insure and modify to pretty handy. Membership allows you access to a 24/5 telephone helpline and other useful things. In 10 you need a \$10K 'Tax' between Jan's of New Adult there need a 'Change or Postal order for her quick made payable to "Karen Fortnight (\$10K CLUB)" to the following address, and don't forget to include your \$10K serial number.

ANDY CHAM
1 NORTH HAVEN
WESTON, MA 02459
617/326-1111
A. CHAM
P.O. BOX

Lots of people have been sending me their programs over the past couple of months, all of your contributions are very much appreciated. I'm planning to do a major issue of the INDATA and OUTDATA zines to include all of your useful additions (some of which I don't at the moment but soon it will be possible to see

partially re-entered data as well as other job additions. If you wish to send me any programs for the column or PCJ library, or if you have any nasty problems with ETEK, I can be found typing away at the editors. I sure, I say that you send will be returned as soon as possible but please remember to include an S.A.R. if you wish an ultra speedy reply (James Tatum was annoyed by the letter he received 48 hours after writing to me!).

The address is
PETER HICKMAN
34 CLEVERLY ESTATE
WORMHOLT ROAD
LONDON
W12 0LN

NEW STOR EP0 DISK

A number of new IJGK public domain titles are available from our Library Shop this issue in addition to the following:

© 2004 Blackwell Publishing Ltd *Journal of Internal Medicine* 255: 105–112

STON MASTING DAMPLER. Tightly sealed damping mats to use in your engine.

VIDEO TYPING TUTOR: A fun, fast, and very needed, typing tutor with many, many facilities. Both basic and advanced versions are on the disk as *VIDEO* is not enough to get the version.

all sizes are \$2.95 each. Orders should be sent to: P.O. Box 74, Buffalo, NY 14209 or call and orders can be accepted on 800-773-0800. Further details on these items are in our latest 42 Buyers Guide, available on request.

Figure 1

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 43

£1.75

April/May

XL/XE

SKIRMISH!

One player
SIX planes
Can you cope?



MORE GAME CHEATS
PRIVATE LIVES AVAILABLE
ON ADXL COMMANDER!

FEELING UNDER PAR?

CHECK YOUR BIORHYTHMS ON YOUR ATARI

ST FILE

**PUBLIC
DOMAIN**
THE BEST DEMOS
REVIEWED

STOS COLUMN - DESIGN HUGE SPRITES WITH OUR
TYPE-IN PROGRAM
SEQUENCING WITH PRO TWELVE
BOMBUZAL SECRETS

D & D - FROM THE BEGINNING TO HILLSFAR



read a psychic in the movies port, this routine will be given away with Cartoon Capers when it is released sometime in March I am assured. Unfortunately I have not had the chance to try it, and yet but I have seen it in action and it seems to work very well.

THE PROGRAMS

Programming time. The first of this month's programs (see previous page) comes from Francois Lionet himself. He has written a new program that takes your sprites and joins them together to make even bigger sprites, he says the size of the joined sprites is unlimited but STOS will do strange things if they are larger than 128x128 pixels because that is the maximum size of the 68000 sprite buffer. Type in LISTING 1 for some big sprites.

HOW IT WORKS

LISTING 10 - Set's up the variables needed by the program.

LISTING 50-60 - Clear any sprite bank that may be in memory and then present you with a file selector.

LISTING 60-100 - Clear the screen and change the palette to that of the sprite bank.

LISTING 100-200 - Allow you to draw with the sprites.

LISTING 200-300 - Control the whole program, jumping to various routines when a particular key is pressed.

LISTING 300-400 - Mark a box around the area of the screen you want to turn into a sprite.

LISTING 400-450 - Grab the block of screen and store it in the variable `BACKGR` using the `MOVEIN` function.

LISTING 450-480 - Perform the complex task of converting the `BACKGR` data into sprites, although this may look incredibly complicated it's easy to tell we are dealing with sprites here because of the sprite bank memory number `0` (`BACKGR` contained in line 415, this is `LISTING 10-200` is the version of `MOVEIN` for largeups or `0` if it's considered into the beginning of the new bank).

LISTING 480-500 - Display a file selector over the new bank.

Now if the listing seems a little bit messy and not too well structured don't worry about it, all you need to know is that it does the job it was written for (although

```

100 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
101 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
102 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
103 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
104 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
105 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
106 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
107 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
108 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
109 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
110 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
111 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
112 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
113 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
114 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
115 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
116 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
117 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
118 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
119 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
120 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
121 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
122 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
123 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
124 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
125 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
126 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
127 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
128 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
129 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
130 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
131 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
132 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
133 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
134 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
135 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
136 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
137 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
138 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
139 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
140 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
141 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
142 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
143 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
144 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
145 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
146 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
147 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
148 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
149 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
150 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
151 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
152 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
153 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
154 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
155 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
156 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
157 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
158 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
159 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
160 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
161 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
162 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
163 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
164 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
165 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
166 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
167 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
168 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
169 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
170 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
171 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
172 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
173 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
174 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
175 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
176 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
177 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
178 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
179 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
180 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
181 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
182 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
183 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
184 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
185 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
186 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
187 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
188 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
189 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
190 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
191 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
192 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
193 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
194 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
195 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
196 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
197 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
198 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
199 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0
200 bank bank = bank 0 : bank 0 = 0 : bank 0 = 0 : bank 0

```

Above - screen effects demo by Francois Lionet

Right - Peter Hickman's moving sprite demo

don't ask me how!).

Once you have typed the program in, run it and you will be faced with a file selector. Use this file selector to load a previously saved sprite bank and you will now be able to point with a sprite from your bank. Use the + and - keys on the numeric keypad to change the sprite, press Escape to end the program and press 'C' to create the new sprite bank (see remember to grab the new sprites on blocks first). When you press Return, a large flashing square will cover the screen. You can change the size of this by pressing the left and right mouse buttons to move the corners of the square. At this point pressing Return again will grab that area as a block ready to be turned into a sprite. Pressing Escape will end the program, pressing 'C' changes the block number, pressing 'Q' clears that block and pressing space allows you to go back and point with some more sprites. As you can see the

program is a little tricky to get the hang of, but stick with it and you will soon be producing lovely big sprites.

SCREEN EFFECTS

The next program this month is an effects demo written by Francois (see again) to make screens disappear. Type in PROGRAM 2 and have some fun. The listing is so incredibly simple it's not even worth me doing a breakdown, but let's go through it anyway.

LISTING 10-20 - Clear the screen and load the picture contained in your STOS boot disk.

LISTING 40 - Jump to the first effect, which set of makes the screen vanish one line at a time.

LISTING 50 - Copies the background screen (which still has a copy of the picture) onto the physical screen (which has just

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 44

£1.75

June/July

XL/XE

GREEN FINGERS

Can you make your garden grow?

DIAMOND GOS

MAKE YOUR XL/XE
LOOK LIKE AN ST



ST FILE

PUBLIC DOMAIN

THE BEST OF
ACCESSORIES

BEHIND THE SCENES AT ZEPPELIN

STOS COLUMN · TYPE-IN DEMOS
YAMAHA PSS SERIES AND THE ST
DRAKKHEN · NEW STYLE D&D
FIRE BRIGADE ·
WARGAMING FROM AUSTRALIA



STOS

COLUMN

OUR STOS COMPETITION

This issue sees the end of the super competition I launched about four months ago. At least it would be if I had received any entries!! Top, that's right, I have not seen one disk pop through my letter box containing an 8-bit classic. So after a short consultation with Richard (I can't stand the stress) Vanner and Aaron (I've just thought of another brilliant game I can write with STOS) Pathlight we have decided to change nature of the competition a bit.

1. The closing date is now August 20th
2. Instead of writing a conversion of any old 8-bit game, we now want a platform game which is faithful to old favourites like Miner 2049er, Magic Miner, Lode Runner and Jump Man
3. With your entries remember to include your name, address, phone number (if you have one), program source code (if you submit a compiled program), and finally please tell us if your program has any special requirements

To remind you of the brilliant prizes on offer here is a complete list

FIRST PRIZE

STOS MUSICIAN, STOS MAESTRO PLUS, STOS COMPILER, SPRITES 606, THE TOTAL MAP EDITOR (TOME) and MINI OFFICE PROFESSIONAL (COMMS, SPREADSHEET AND GRAPHICS)

SECOND PRIZE

GAMES GALORE, BYSTRIKE PLUS, LANCELOT, TIME & MAGIC and STOS MAESTRO (not the Plus version)

THIRD PRIZE

THE THREE FUN SCHOOL 2 PACKAGES (under 6's, 6-8's, and over 8's)

As if that wasn't enough Mandarins are putting together a new edition of GAMES GALORE (surprisingly called GAMES GALORE II) and they want some more stuff to go on it, you never know it might be your game!! Of course if I don't get any entries this time I will just keep MINI OFFICE and Bug the rest for a nice profit, so get writing and send your brilliant platform games to me at the usual address!

Over the past few issues you may have noticed that I have been going over the top with information for products that Mandarins current seems to launch. This is going to be the final update until they are released because to tell you the truth it's getting pretty boring saying the same things month after month. To be fair to Mandarins they have suffered a bit of bad luck concerning a few of their STOS releases but hopefully fingers crossed this summer should see a steady stream of STOS related products appearing in the shops. First on my list is STOS Musician, this little gem has been totally rewritten, share rates of its release took in November, it looks like but I still don't have a positive release date. Carsten Capers, winner of the STOS competition has finally appeared, I have a review copy which (unfortunately) seems to have been slightly damaged in transit so all I could salvage from the two disks was the twin joystick extension which allows you to read both joystick ports, look out for a review in the next issue. Last but not least is STOS VIDI the video digitiser. This is a tricky one, I have seen the hardware and the STOS extension which controls the board but the video software has yet to be written, so once again there is no positive release date.

While I'm on the subject of STOS products, Robin Edwards of Madrigal UK has sent me some copies of their latest tremendous STOS games, Mr Dig, Tank Battle, Crystal Caverns and Space Fish. All of the games are available from the Page 6 PD library, so check 'em out. Unfortunately the source code is not included with any of them, perhaps Madrigal could consider publishing a collection of STOS source so that everybody can take a look at how Robin has achieved such good results.

BOOT SECTOR PROTECTION

Programming time. First up is a neat utility by Daniel Spooner. It consists of two programs, one writes a unique code onto the boot sector of the disk, the other is a small program to read the boot sec-

- LISTEN** Colors the screen
- LISTEN PG** Jumps to the next chapter
- LISTEN NO** Displays a nice message if the initial chapter shows that the disk has been impregnated with your code
- LISTEN NOOOO** Sets up an army to build your code and creates a currency bank to build the nation

[illegible]

Listings 1 and 2: Boot Sector Protection

[illegible]

LINE 8010 Print the rule in the array CODES
LINE 8020 Reads the last sector into the memory bank
LINE 8040-8050 Check to see if your code matched the one on disk
LINE 8070 If the code is different to yours this line does a lot of banking and calls you a pirate!! Nice huh?

I would just like to say that neither the publishers of this magazine or myself can be held responsible for any disks corrupted by using this program, although if you use it properly it could be a very useful utility, it works for me! Well, if you take the advice of one of my old computer science teachers the only way to protect your software from piracy is to lock it in a safe, and that was a recommended exam answer!

LET'S GO CYCLING!

Demo's new, many of you out there in computerland will be familiar with the type of programs that are coming up, they follow some very sound principles that have been discussed in great length within magazines such as **COMPUTE!**, **BYTE**, and **PERSONAL COMPUTER WORLD**, all of which are fine magazines but don't feature any BASIC stuff. Programs 8.4, and 8 all draw strange patterns on the screen, and use the MOD function to produce cycling colours. They all follow a very similar format so I will just give you a breakdown of PROGRAM 8.

HOW IT WORKS

LINE 80-170 Define the main variables, note the 4 symbols define floating point numbers. Try changing K2 to 80 and K4 to 20
LINE 180-240 Calculate coordinates and draw the lines. The colour is cycled from 1 to 15 (and back again) by using the MOD function. Try changing the SET4/5.2 in LINE 230 to other values to produce some more weird patterns
LINE 250-280 Contains yet another colour cycling routine, this one simply reads the value of a colour register and places it into the register below that one, thus cycling the colours down

```

10 .....
20 .....
30 .....
40 .....
50 .....
60 .....
70 .....
80 .....
90 .....
100 .....
110 .....
120 .....
130 .....
140 .....
150 .....
160 .....
170 .....
180 .....
190 .....
200 .....
210 .....
220 .....
230 .....
240 .....
250 .....
260 .....
270 .....
280 .....
290 .....
300 .....
310 .....
320 .....
330 .....
340 .....
350 .....
360 .....
370 .....
380 .....
390 .....
400 .....
410 .....
420 .....
430 .....
440 .....
450 .....
460 .....
470 .....
480 .....
490 .....
500 .....
510 .....
520 .....
530 .....
540 .....
550 .....
560 .....
570 .....
580 .....
590 .....
600 .....
610 .....
620 .....
630 .....
640 .....
650 .....
660 .....
670 .....
680 .....
690 .....
700 .....
710 .....
720 .....
730 .....
740 .....
750 .....
760 .....
770 .....
780 .....
790 .....
800 .....
810 .....
820 .....
830 .....
840 .....
850 .....
860 .....
870 .....
880 .....
890 .....
900 .....
910 .....
920 .....
930 .....
940 .....
950 .....
960 .....
970 .....
980 .....
990 .....

```

```

10 .....
20 .....
30 .....
40 .....
50 .....
60 .....
70 .....
80 .....
90 .....
100 .....
110 .....
120 .....
130 .....
140 .....
150 .....
160 .....
170 .....
180 .....
190 .....
200 .....
210 .....
220 .....
230 .....
240 .....
250 .....
260 .....
270 .....
280 .....
290 .....
300 .....
310 .....
320 .....
330 .....
340 .....
350 .....
360 .....
370 .....
380 .....
390 .....
400 .....
410 .....
420 .....
430 .....
440 .....
450 .....
460 .....
470 .....
480 .....
490 .....
500 .....
510 .....
520 .....
530 .....
540 .....
550 .....
560 .....
570 .....
580 .....
590 .....
600 .....
610 .....
620 .....
630 .....
640 .....
650 .....
660 .....
670 .....
680 .....
690 .....
700 .....
710 .....
720 .....
730 .....
740 .....
750 .....
760 .....
770 .....
780 .....
790 .....
800 .....
810 .....
820 .....
830 .....
840 .....
850 .....
860 .....
870 .....
880 .....
890 .....
900 .....
910 .....
920 .....
930 .....
940 .....
950 .....
960 .....
970 .....
980 .....
990 .....

```

Above and top right
 - Peter Hickman's graphics demos

Bottom right
 Francois Lionet's Robots demo

```

100 .....
101 .....
102 .....
103 .....
104 .....
105 .....
106 .....
107 .....
108 .....
109 .....
110 .....
111 .....
112 .....
113 .....
114 .....
115 .....
116 .....
117 .....
118 .....
119 .....
120 .....
121 .....
122 .....
123 .....
124 .....
125 .....
126 .....
127 .....
128 .....
129 .....
130 .....
131 .....
132 .....
133 .....
134 .....
135 .....
136 .....
137 .....
138 .....
139 .....
140 .....
141 .....
142 .....
143 .....
144 .....
145 .....
146 .....
147 .....
148 .....
149 .....
150 .....
151 .....
152 .....
153 .....
154 .....
155 .....
156 .....
157 .....
158 .....
159 .....
160 .....
161 .....
162 .....
163 .....
164 .....
165 .....
166 .....
167 .....
168 .....
169 .....
170 .....
171 .....
172 .....
173 .....
174 .....
175 .....
176 .....
177 .....
178 .....
179 .....
180 .....
181 .....
182 .....
183 .....
184 .....
185 .....
186 .....
187 .....
188 .....
189 .....
190 .....
191 .....
192 .....
193 .....
194 .....
195 .....
196 .....
197 .....
198 .....
199 .....
200 .....
201 .....
202 .....
203 .....
204 .....
205 .....
206 .....
207 .....
208 .....
209 .....
210 .....
211 .....
212 .....
213 .....
214 .....
215 .....
216 .....
217 .....
218 .....
219 .....
220 .....
221 .....
222 .....
223 .....
224 .....
225 .....
226 .....
227 .....
228 .....
229 .....
230 .....
231 .....
232 .....
233 .....
234 .....
235 .....
236 .....
237 .....
238 .....
239 .....
240 .....
241 .....
242 .....
243 .....
244 .....
245 .....
246 .....
247 .....
248 .....
249 .....
250 .....
251 .....
252 .....
253 .....
254 .....
255 .....
256 .....
257 .....
258 .....
259 .....
260 .....
261 .....
262 .....
263 .....
264 .....
265 .....
266 .....
267 .....
268 .....
269 .....
270 .....
271 .....
272 .....
273 .....
274 .....
275 .....
276 .....
277 .....
278 .....
279 .....
280 .....
281 .....
282 .....
283 .....
284 .....
285 .....
286 .....
287 .....
288 .....
289 .....
290 .....
291 .....
292 .....
293 .....
294 .....
295 .....
296 .....
297 .....
298 .....
299 .....
300 .....
301 .....
302 .....
303 .....
304 .....
305 .....
306 .....
307 .....
308 .....
309 .....
310 .....
311 .....
312 .....
313 .....
314 .....
315 .....
316 .....
317 .....
318 .....
319 .....
320 .....
321 .....
322 .....
323 .....
324 .....
325 .....
326 .....
327 .....
328 .....
329 .....
330 .....
331 .....
332 .....
333 .....
334 .....
335 .....
336 .....
337 .....
338 .....
339 .....
340 .....
341 .....
342 .....
343 .....
344 .....
345 .....
346 .....
347 .....
348 .....
349 .....
350 .....
351 .....
352 .....
353 .....
354 .....
355 .....
356 .....
357 .....
358 .....
359 .....
360 .....
361 .....
362 .....
363 .....
364 .....
365 .....
366 .....
367 .....
368 .....
369 .....
370 .....
371 .....
372 .....
373 .....
374 .....
375 .....
376 .....
377 .....
378 .....
379 .....
380 .....
381 .....
382 .....
383 .....
384 .....
385 .....
386 .....
387 .....
388 .....
389 .....
390 .....
391 .....
392 .....
393 .....
394 .....
395 .....
396 .....
397 .....
398 .....
399 .....
400 .....
401 .....
402 .....
403 .....
404 .....
405 .....
406 .....
407 .....
408 .....
409 .....
410 .....
411 .....
412 .....
413 .....
414 .....
415 .....
416 .....
417 .....
418 .....
419 .....
420 .....
421 .....
422 .....
423 .....
424 .....
425 .....
426 .....
427 .....
428 .....
429 .....
430 .....
431 .....
432 .....
433 .....
434 .....
435 .....
436 .....
437 .....
438 .....
439 .....
440 .....
441 .....
442 .....
443 .....
444 .....
445 .....
446 .....
447 .....
448 .....
449 .....
450 .....
451 .....
452 .....
453 .....
454 .....
455 .....
456 .....
457 .....
458 .....
459 .....
460 .....
461 .....
462 .....
463 .....
464 .....
465 .....
466 .....
467 .....
468 .....
469 .....
470 .....
471 .....
472 .....
473 .....
474 .....
475 .....
476 .....
477 .....
478 .....
479 .....
480 .....
481 .....
482 .....
483 .....
484 .....
485 .....
486 .....
487 .....
488 .....
489 .....
490 .....
491 .....
492 .....
493 .....
494 .....
495 .....
496 .....
497 .....
498 .....
499 .....
500 .....
501 .....
502 .....
503 .....
504 .....
505 .....
506 .....
507 .....
508 .....
509 .....
510 .....
511 .....
512 .....
513 .....
514 .....
515 .....
516 .....
517 .....
518 .....
519 .....
520 .....
521 .....
522 .....
523 .....
524 .....
525 .....
526 .....
527 .....
528 .....
529 .....
530 .....
531 .....
532 .....
533 .....
534 .....
535 .....
536 .....
537 .....
538 .....
539 .....
540 .....
541 .....
542 .....
543 .....
544 .....
545 .....
546 .....
547 .....
548 .....
549 .....
550 .....
551 .....
552 .....
553 .....
554 .....
555 .....
556 .....
557 .....
558 .....
559 .....
560 .....
561 .....
562 .....
563 .....
564 .....
565 .....
566 .....
567 .....
568 .....
569 .....
570 .....
571 .....
572 .....
573 .....
574 .....
575 .....
576 .....
577 .....
578 .....
579 .....
580 .....
581 .....
582 .....
583 .....
584 .....
585 .....
586 .....
587 .....
588 .....
589 .....
590 .....
591 .....
592 .....
593 .....
594 .....
595 .....
596 .....
597 .....
598 .....
599 .....
600 .....
601 .....
602 .....
603 .....
604 .....
605 .....
606 .....
607 .....
608 .....
609 .....
610 .....
611 .....
612 .....
613 .....
614 .....
615 .....
616 .....
617 .....
618 .....
619 .....
620 .....
621 .....
622 .....
623 .....
624 .....
625 .....
626 .....
627 .....
628 .....
629 .....
630 .....
631 .....
632 .....
633 .....
634 .....
635 .....
636 .....
637 .....
638 .....
639 .....
640 .....
641 .....
642 .....
643 .....
644 .....
645 .....
646 .....
647 .....
648 .....
649 .....
650 .....
651 .....
652 .....
653 .....
654 .....
655 .....
656 .....
657 .....
658 .....
659 .....
660 .....
661 .....
662 .....
663 .....
664 .....
665 .....
666 .....
667 .....
668 .....
669 .....
670 .....
671 .....
672 .....
673 .....
674 .....
675 .....
676 .....
677 .....
678 .....
679 .....
680 .....
681 .....
682 .....
683 .....
684 .....
685 .....
686 .....
687 .....
688 .....
689 .....
690 .....
691 .....
692 .....
693 .....
694 .....
695 .....
696 .....
697 .....
698 .....
699 .....
700 .....
701 .....
702 .....
703 .....
704 .....
705 .....
706 .....
707 .....
708 .....
709 .....
710 .....
711 .....
712 .....
713 .....
714 .....
715 .....
716 .....
717 .....
718 .....
719 .....
720 .....
721 .....
722 .....
723 .....
724 .....
725 .....
726 .....
727 .....
728 .....
729 .....
730 .....
731 .....
732 .....
733 .....
734 .....
735 .....
736 .....
737 .....
738 .....
739 .....
740 .....
741 .....
742 .....
743 .....
744 .....
745 .....
746 .....
747 .....
748 .....
749 .....
750 .....
751 .....
752 .....
753 .....
754 .....
755 .....
756 .....
757 .....
758 .....
759 .....
760 .....
761 .....
762 .....
763 .....
764 .....
765 .....
766 .....
767 .....
768 .....
769 .....
770 .....
771 .....
772 .....
773 .....
774 .....
775 .....
776 .....
777 .....
778 .....
779 .....
780 .....
781 .....
782 .....
783 .....
784 .....
785 .....
786 .....
787 .....
788 .....
789 .....
790 .....
791 .....
792 .....
793 .....
794 .....
795 .....
796 .....
797 .....
798 .....
799 .....
800 .....
801 .....
802 .....
803 .....
804 .....
805 .....
806 .....
807 .....
808 .....
809 .....
810 .....
811 .....
812 .....
813 .....
814 .....
815 .....
816 .....
817 .....
818 .....
819 .....
820 .....
821 .....
822 .....
823 .....
824 .....
825 .....
826 .....
827 .....
828 .....
829 .....
830 .....
831 .....
832 .....
833 .....
834 .....
835 .....
836 .....
837 .....
838 .....
839 .....
840 .....
841 .....
842 .....
843 .....
844 .....
845 .....
846 .....
847 .....
848 .....
849 .....
850 .....
851 .....
852 .....
853 .....
854 .....
855 .....
856 .....
857 .....
858 .....
859 .....
860 .....
861 .....
862 .....
863 .....
864 .....
865 .....
866 .....
867 .....
868 .....
869 .....
870 .....
871 .....
872 .....
873 .....
874 .....
875 .....
876 .....
877 .....
878 .....
879 .....
880 .....
881 .....
882 .....
883 .....
884 .....
885 .....
886 .....
887 .....
888 .....
889 .....
890 .....
891 .....
892 .....
893 .....
894 .....
895 .....
896 .....
897 .....
898 .....
899 .....
900 .....
901 .....
902 .....
903 .....
904 .....
905 .....
906 .....
907 .....
908 .....
909 .....
910 .....
911 .....
912 .....
913 .....
914 .....
915 .....
916 .....
917 .....
918 .....
919 .....
920 .....
921 .....
922 .....
923 .....
924 .....
925 .....
926 .....
927 .....
928 .....
929 .....
930 .....
931 .....
932 .....
933 .....
934 .....
935 .....
936 .....
937 .....
938 .....
939 .....
940 .....
941 .....
942 .....
943 .....
944 .....
945 .....
946 .....
947 .....
948 .....
949 .....
950 .....
951 .....
952 .....
953 .....
954 .....
955 .....
956 .....
957 .....
958 .....
959 .....
960 .....
961 .....
962 .....
963 .....
964 .....
965 .....
966 .....
967 .....
968 .....
969 .....
970 .....
971 .....
972 .....
973 .....
974 .....
975 .....
976 .....
977 .....
978 .....
979 .....
980 .....
981 .....
982 .....
983 .....
984 .....
985 .....
986 .....
987 .....
988 .....
989 .....
990 .....
991 .....
992 .....
993 .....
994 .....
995 .....
996 .....
997 .....
998 .....
999 .....
1000 .....

```

```

100 .....
101 .....
102 .....
103 .....
104 .....
105 .....
106 .....
107 .....
108 .....
109 .....
110 .....
111 .....
112 .....
113 .....
114 .....
115 .....
116 .....
117 .....
118 .....
119 .....
120 .....
121 .....
122 .....
123 .....
124 .....
125 .....
126 .....
127 .....
128 .....
129 .....
130 .....
131 .....
132 .....
133 .....
134 .....
135 .....
136 .....
137 .....
138 .....
139 .....
140 .....
141 .....
142 .....
143 .....
144 .....
145 .....
146 .....
147 .....
148 .....
149 .....
150 .....
151 .....
152 .....
153 .....
154 .....
155 .....
156 .....
157 .....
158 .....
159 .....
160 .....
161 .....
162 .....
163 .....
164 .....
165 .....
166 .....
167 .....
168 .....
169 .....
170 .....
171 .....
172 .....
173 .....
174 .....
175 .....
176 .....
177 .....
178 .....
179 .....
180 .....
181 .....
182 .....
183 .....
184 .....
185 .....
186 .....
187 .....
188 .....
189 .....
190 .....
191 .....
192 .....
193 .....
194 .....
195 .....
196 .....
197 .....
198 .....
199 .....
200 .....
201 .....
202 .....
203 .....
204 .....
205 .....
206 .....
207 .....
208 .....
209 .....
210 .....
211 .....
212 .....
213 .....
214 .....
215 .....
216 .....
217 .....
218 .....
219 .....
220 .....
221 .....
222 .....
223 .....
224 .....
225 .....
226 .....
227 .....
228 .....
229 .....
230 .....
231 .....
232 .....
233 .....
234 .....
235 .....
236 .....
237 .....
238 .....
239 .....
240 .....
241 .....
242 .....
243 .....
244 .....
245 .....
246 .....
247 .....
248 .....
249 .....
250 .....
251 .....
252 .....
253 .....
254 .....
255 .....
256 .....
257 .....
258 .....
259 .....
260 .....
261 .....
262 .....
263 .....
264 .....
265 .....
266 .....
267 .....
268 .....
269 .....
270 .....
271 .....
272 .....
273 .....
274 .....
275 .....
276 .....
277 .....
278 .....
279 .....
280 .....
281 .....
282 .....
283 .....
284 .....
285 .....
286 .....
287 .....
288 .....
289 .....
290 .....
291 .....
292 .....
293 .....
294 .....
295 .....
296 .....
297 .....
298 .....
299 .....
300 .....
301 .....
302 .....
303 .....
304 .....
305 .....
306 .....
307 .....
308 .....
309 .....
310 .....
311 .....
312 .....
313 .....
314 .....
315 .....
316 .....
317 .....
318 .....
319 .....
320 .....
321 .....
322 .....
323 .....
324 .....
325 .....
326 .....
327 .....
328 .....
329 .....
330 .....
331 .....
332 .....
333 .....
334 .....
335 .....
336 .....
337 .....
338 .....
339 .....
340 .....
341 .....
342 .....
343 .....
344 .....
345 .....
346 .....
347 .....
348 .....
349 .....
350 .....
351 .....
352 .....
353 .....
354 .....
355 .....
356 .....
357 .....
358 .....
359 .....
360 .....
361 .....
362 .....
363 .....
364 .....
365 .....
366 .....
367 .....
368 .....
369 .....
370 .....
371 .....
372 .....
373 .....
374 .....
375 .....
376 .....
377 .....
378 .....
379 .....
380 .....
381 .....
382 .....
383 .....
384 .....
385 .....
386 .....
387 .....
388 .....
389 .....
390 .....
391 .....
392 .....
393 .....
394 .....
395 .....
396 .....
397 .....
398 .....
399 .....
400 .....
401 .....
402 .....
403 .....
404 .....
405 .....
406 .....
407 .....
408 .....
409 .....
410 .....
411 .....
412 .....
413 .....
414 .....
415 .....
416 .....
417 .....
418 .....
419 .....
420 .....
421 .....
422 .....
423 .....
424 .....
425 .....
426 .....
427 .....
428 .....
429 .....
430 .....
431 .....
432 .....
433 .....
434 .....
435 .....
436 .....
437 .....
438 .....
439 .....
440 .....
441 .....
442 .....
443 .....
444 .....
445 .....
446 .....
447 .....
448 .....
449 .....
450 .....
451 .....
452 .....
453 .....
454 .....
455 .....
456 .....
457 .....
458 .....
459 .....
460 .....
461 .....
462 .....
463 .....
464 .....
465 .....
466 .....
467 .....
468 .....
469 .....
470 .....
471 .....
472 .....
473 .....
474 .....
475 .....
476 .....
477 .....
478 .....
479 .....
480 .....
481 .....
482 .....
483 .....
484 .....
485 .....
486 .....
487 .....
488 .....
489 .....
490 .....
491 .....
492 .....
493 .....
494 .....
495 .....
496 .....
497 .....
498 .....
499 .....
500 .....
501 .....
502 .....
503 .....
504 .....
505 .....
506 .....
507 .....
508 .....
509 .....
510 .....
511 .....
512 .....
513 .....
514 .....
515 .....
516 .....
517 .....
518 .....
519 .....
520 .....
521 .....
522 .....
523 .....
524 .....
525 .....
526 .....
527 .....
528 .....
529 .....
530 .....
531 .....
532 .....
533 .....
534 .....
535 .....
536 .....
537 .....
538 .....
539 .....
540 .....
541 .....
542 .....
543 .....
544 .....
545 .....
546 .....
547 .....
548 .....
549 .....
550 .....
551 .....
552 .....
553 .....
554 .....
555 .....
556 .....
557 .....
558 .....
559 .....
560 .....
561 .....
562 .....
563 .....
564 .....
565 .....
566 .....
567 .....
568 .....
569 .....
570 .....
571 .....
572 .....
573 .....
574 .....
575 .....
576 .....
577 .....
578 .....
579 .....
580 .....
581 .....
582 .....
583 .....
584 .....
585 .....
586 .....
587 .....
588 .....
589 .....
590 .....
591 .....
592 .....
593 .....
594 .....
595 .....
596 .....
597 .....
598 .....
599 .....
600 .....
601 .....
602 .....
603 .....
604 .....
605 .....
606 .....
607 .....
608 .....
609 .....
610 .....
611 .....
612 .....
613 .....
614 .....
615 .....
616 .....
617 .....
618 .....
619 .....
620 .....
621 .....
622 .....
623 .....
624 .....
625 .....
626 .....
627 .....
628 .....
629 .....
630 .....
631 .....
632 .....
633 .....
634 .....
635 .....
636 .....
637 .....
638 .....
639 .....
640 .....
641 .....
642 .....
643 .....
644 .....
645 .....
646 .....
647 .....
648 .....
649 .....
650 .....
651 .....
652 .....
653 .....
654 .....
655 .....
656 .....
657 .....
658 .....
659 .....
660 .....
661 .....
662 .....
663 .....
664 .....
665 .....
666 .....
667 .....
668 .....
669 .....
670 .....
671 .....
672 .....
673 .....
674 .....
675 .....
676 .....
677 .....
678 .....
679 .....
680 .....
681 .....
682 .....
683 .....
684 .....
685 .....
686 .....
687 .....
688 .....
689 .....
690 .....
691 .....
692 .....
693 .....
694 .....
695 .....
696 .....
697 .....
698 .....
699 .....
700 .....
701 .....
702 .....
703 .....
704 .....
705 .....
706 .....
707 .....
708 .....
709 .....
710 .....
711 .....
712 .....
713 .....
714 .....
715 .....
716 .....
717 .....
718 .....
719 .....
720 .....
721 .....
722 .....
723 .....
724 .....
725 .....
726 .....
727 .....
728 .....
729 .....
730 .....
731 .....
732 .....
733 .....
734 .....
735 .....
736 .....
737 .....
738 .....
739 .....
740 .....
741 .....
742 .....
743 .....
744 .....
745 .....
746 .....
747 .....
748 .....
749 .....
750 .....
751 .....
752 .....
753 .....
754 .....
755 .....
756 .....
757 .....
758 .....
759 .....
760 .....
761 .....
762 .....
763 .....
764 .....
765 .....
766 .....
767 .....
768 .....
769 .....
770 .....
771 .....
772 .....
773 .....
774 .....
775 .....
776 .....
777 .....
778 .....
779 .....
780 .....
781 .....
782 .....
783 .....
784 .....
785 .....
786 .....
787 .....
788 .....
789 .....
790 .....
791 .....
792 .....
793 .....
794 .....
795 .....
796 .....
797 .....
798 .....
799 .....
800 .....
801 .....
802 .....
803 .....
804 .....
805 .....
806 .....
807 .....
808 .....
809 .....
810 .....
811 .....
812 .....
813 .....
814 .....
815 .....
816 .....
817 .....
818 .....
819 .....
820 .....
821 .....
822 .....
823 .....
824 .....
825 .....
826 .....
827 .....
828 .....
829 .....
830 .....
831 .....
832 .....
833 .....
834 .....
835 .....
836 .....
837 .....
838 .....
839 .....
840 .....
841 .....
842 .....
843 .....
844 .....
845 .....
846 .....
847 .....
848 .....
849 .....
850 .....
851 .....
852 .....
853 .....
854 .....
855 .....
856 .....
857 .....
858 .....
859 .....
860 .....
861 .....
862 .....
863 .....
864 .....
865 .....
866 .....
867 .....
868 .....
869 .....
870 .....
871 .....
872 .....
873 .....
874 .....
875 .....
876 .....
877 .....
878 .....
879 .....
880 .....
881 .....
882 .....
883 .....
884 .....
885 .....
886 .....
887 .....
888 .....
889 .....
890 .....
891 .....
892 .....
893 .....
894 .....
895 .....
896 .....
897 .....
898 .....
899 .....
900 .....
901 .....
902 .....
903 .....
904 .....
905 .....
906 .....
907 .....
908 .....
909 .....
910 .....
911 .....
912 .....
913 .....
914 .....
915 .....
916 .....
917 .....
918 .....
919 .....
920 .....
921 .....
922 .....
923 .....
924 .....
925 .....
926 .....
927 .....
928 .....
929 .....
930 .....
931 .....
932 .....
933 .....
934 .....
935 .....
936 .....
937 .....
938 .....
939 .....
940 .....
941 .....
942 .....
943 .....
944 .....
945 .....
946 .....
947 .....
948 .....
949 .....
950 .....
951 .....
952 .....
953 .....
954 .....
955 .....
956 .....
957 .....
958 .....
959 .....
960 .....
961 .....
962 .....
963 .....
964 .....
965 .....
966 .....
967 .....
968 .....
969 .....
970 .....
971 .....
972 .....
973 .....
974 .....
975 .....
976 .....
977 .....
978 .....
979 .....
980 .....
981 .....
982 .....
983 .....
984 .....
985 .....
986 .....
987 .....
988 .....
989 .....
990 .....
991 .....
992 .....
993 .....
994 .....
995 .....
996 .....
997 .....
998 .....
999 .....
1000 .....

```

If anybody comes up with any interesting variations on these programs, send 'em to me and I'll stick the best ones in the next issue if I get any!!

SEND IN THE DROIDS

This issue's last program is a mega-droid from Francisco Lloret. It consists of 15 robots moving up and down in a wavy line. Type in PROGRAM 9, but before you run it make sure you have a disk containing the "DROID.MRK" (from the STOS accessories disk) in your drive.

HOW IT WORKS

LINE 65 Loads the sprite
LINE 65-130 Sets up the screen, grabs the sprite colour palette and turns the automatic sprite update
LINE 170-200 Draw sprites 1-15 in pairs, and starts them moving
LINE 210 This line is interesting because it causes a small delay between each sprite initialisation, this means the sprite has a small time to move before the next sprite appears, thus giving the wavy effect
LINE 230 Switches the animation on

LINE 260 Starts the manual sprite update process
LINE 270 Clears the background screen
LINE 280 Redraws all the sprites in the background screen
LINE 290 Draws the screens making the sprites instantly appear
LINE 300 Waits for 1 VBL
LINE 310 Waits for the mouse key to be pressed

LEARNING TO SPELL

Before I pop off let me just tell you about a new addition to the Page 6 PD library. A new educational program called Magic Speller has recently been sent to me by Jim Prewer (Ja Jim). Jim also wrote the excellent Multimed program which can be found along with my Treasury Search game on STOS. The main attraction of Magic Speller is that it not only speaks, not digitises but actually STOS generated speech! The program which does all the work is actually a PD speech generator which has been available for some time - SPEAKEX. This program was altered slightly so that it didn't interfere with the STOS interrupt by Martin Taylor, a copy of the program together with a sheet (sent from me and documentation will be available on the next Page 6 STOS column disk together with programs from the first five issues, so for more details of both these disks drop Page 6 a line.

COMING NEXT?

That's about it for this issue, next time I will (hopefully!) do a SPEAKEX tutorial, a couple more droids and on a more sinister note I will be discussing the misuse of STOS as an easy medium for distributing various types of VIRUS. Until then keep STOSing and don't forget to send me any questions, programs, and most importantly competition entries (please!!).

Write to me as follows:

**Peter Hickman
 35 CLEVERLY ESTATE
 WORMHOLT ROAD
 LONDON W12 0LX**

NEW

PAGE 6 PUBLISHING's

ATARI

USER

Issue 45 £1.75
August/September

XL/XE

DILEMMA

A 1 or 2 player
platform game
that makes you
think

**SOFTWARE
BARGAINS**
CHECK INSIDE

THE VIDEO CONNECTION

How to do Video titling with your Atari

ST FILE

**PUBLIC
DOMAIN**
WORD
PROCESSING

STOS COLUMN · QUESTIONS AND ANSWERS
ULTIMA V · STILL AS GOOD?
NEW BOOKS FOR FS2
CASTLE MASTER
UNIVERSAL ITEM SELECTOR



STOS

COLUMN

In which

Peter Hickman

**... makes excuses
for not going to
the Atari Show**

**... is inundated
with entries for
the competition**

**... rattles on
about AMOS**

**... and brings you
the latest news
and STOS related
gossip**

Phere it's been a busy two months since the last issue, and just so that I have room to tell you about everything there are only two program listings in this column.

Did you go to the Atari Show in June? Unfortunately I missed it, but people have told me it was really quite good, especially compared with the last couple of shows organized by Database Exhibitions at the Alexandra Palace. I heard that Aaron Pothergill, editor of the STOS club newsletter, was giving a demonstration of STOS on the Saturday of the event, but even showed all *Mynterik Plus* which is now being sold in a single disk form on the Atlantic budget label. I haven't actually seen this 'newly new' release (anyone at Atlantic reading this?) but as soon as I do a full review will be published.

ENTRIES!

Competition tries, yes I have had some entries! You all had one wanted for a short time there, but thankfully a few readers have come to the rescue with some very interesting platform games. So thanks to Charles Briscoe-Smith, David K. Stood, Richard Gale, and Fraser Newman for their toll games. If you want to enter the competition a list of all the information you need is contained in last issues column (if you don't have it you can buy a back issue directly from Page 6 Publishing). Actually I think this competition is joined, I am down to send off a load of letters and disks to all of those people who had written to me and my printer oh!! My lovely Epson 8000 finally decided to cough out on me, so it is now in the repair shop for a major overhaul and service. Now I cannot survive without a printer so two days ago I bought a very nice Star LC34-10, it's a real inkjet printer that is lovely and fast. Anybody who hasn't received a reply from me concerning STOS now knows the reason, sorry for the delay and I will be in touch eventually.

AMOS time.... If you haven't already seen it in the shape then let me tell you that AMOS (the Amiga version of STOS) was officially released on June 12th. To call it a version of STOS is a little misleading really, in fact it is to STOS what STOS originally was to ST BASIC - a major advancement. The first thing you notice when loading AMOS is the environment in which the program is edited, in many ways it is similar to GFA Basic on the 64 with a word processor-like editing system and a separate direct mode to do things directly (makes sense I suppose). The size of the language is immense, the main file is about 144K!! Fortunately this space has not been wasted you just about every part of the language has been revamped since it's BASIC incarnation.

One of the biggest changes is in the way an object (chip-chips) to us. DRUMS to Amiga (musical) is moved and animated, you can still use the standard STOS Move, Rotate commands but with AMOS you can use *AMAL* (the Amos Animation Language). This new sub-language still uses strings to initialise the animators/movement but, oh boy, are they advanced! You can have loops, labels, gotos, move commands, wait commands etc. In one string thus allowing you to control really complex movements. It is even possible to read the joystick/button states on its interrupt bus within an *AMAL* string! Take a look at the listing 'AMAL Delay' for an example of a typical string. AMOS also makes loading the 60 sprites/cols limit a million times easier than STOS.

Although there are many other major advancements in AMOS the most significantly interesting one for us STOS-ers is the new structuring commands. Procedures with limited parameter passing are now available making AMOS a real hybrid language. On the down side the AMOS manual, although excellently written by Stephen Hill, is a very strange size and isn't ring bound!! Unfortunately this means that when you are writing your latest mega-game you have to open the manual and jump up and down (pre-

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 46 \$1.75
October/November

XL/XE

HOT BLOCKS

A classic ST game
to type in for your
XL/XE

**SOFTWARE
BARGAINS**
CHECK INSIDE



RECORDING SOUND
FROM YOUR ATARI

ALTERNATE INPUT
ROUTINES

TURBO BASIC DEMOS

INFOCOM - R.I.P.

A FINAL FAREWELL TO
THE ADVENTURE KINGS

ST FILE

**PUBLIC
DOMAIN**
WORD PROCESSING
UTILITIES

STOS COLUMN • RAINBOW ROUTINES
DAMOCLES • AT LAST!
GOLD OF AMERICA
SIM CITY
FLOOD • ROTOX • KICK OFF 2



STOS

COLUMN

News about ...

STOS Vidi New STOS PD

Programs for ...

Rainbow Routines Sprite Plotting

Plus...

All the latest gossip about STOS

It's that time of year again, yep you know when all those computer shows seem to appear all in one go. The Commodore, Atari and 16 bit shows have just finished and I'm now preparing to pop along to the European Computer Entertainment Show (although by the time you read this it will all be over, ahhhhh... I, actually I didn't attend the Atari show (as you will know if you read last issue's column) but I did pop along to the 16 bit Fair, and what fun it was. New Atari shows were there (although to tell you the truth I didn't find out until I got home and sifted through the myriad of carrier bags filled with catalogues and leaflets etc.). Maybe I'm getting old but it was really LOUD in those halls, with almost every conceivable piece of musical hardware (BBC's, Anagis's, Sings Mergers, PC England) blasting out melodic (and not so melodic) orchestrations.

VIDI ST

Finally, those wonderful manufacturers of Vidi ST had a little surprise on their minds, no not STOS Vidi but they were selling the STOS extension for Vidi. I have to say good luck to the editor for the STOS Vidi extension will be completed soon, by a small group of programmers called the 16 Tech Heroes, watch this space for more information. Anyway borrowing an Atari's CCTV video camera I tested the extension and just between you and me - it's brilliant, everything you can do with the original Vidi editor can be done with STOS, I can't wait for the STOS Vidi editor.

STOS DEMOS

Also while at the show I met up with Mountain Craig of Riverbank PD, who have just produced an excellent STOS demo with fabulous graphics and wonderful sampled sound, the demo (and in public domain form) is available from the Page 6

PD library) but the source code is shareware and is only available from Riverbank (phone number at the end of this column). I have exhaustively dissected this source code and have discovered some very interesting new things, one of which is a poke which turns off the mouse completely. Actually a lot of the techniques which the demo uses are classic, they look absolutely neat. Missing but they are achieved so simply you'll think you've said 'yes you never thought of them'.

While I was niggling on about demos there is another STOS demo from Richard Gale known as the brilliant STOS Typing Tutor. Using one of the editors from Apple II/II+ you can walk around and enter demo rooms (a typical ST demo style) which then lead up a new demo. This one contains a lot more than the Riverbank demo but it isn't quite as smooth. The source code is available directly from Richard Gale for a small donation towards the Riverbank. Richard To Write Another Fake Demo (and so check it out) it's available from the Page 6 PD library.

THE COMPETITION

The STOS competition is now over finally but I cannot give you a list of prize winners at the moment 'cos I'm writing this at the beginning of August, a full five new time.

Before we take a look at the programs I must issue a word of warning, anybody sending me stuff must now make sure it is STOS compatible (the 1.6 STOS update is PD and available from, guess where?). I must admit that I finally succumbed to temptation and upgraded to a 1040000 (I couldn't cope on my old 5200100) with single sided internal drive, so if you do not have the STOS update please send me the source code in any program so that I can run it from my copy of STOS if you do not want anything else to see your source code just say so and it will remain locked away.

RAINBOWS

Okay, once the programs library is quite a few (this issue), the first two come

From Anthony Harding who has sent me a
 submission to the appeal I made for a 25%
 rainbow road the many times ago.
 Thanks Anthony, the 100 days I promised
 are on their way

THE RAINBOW MODEL

PROGRAM 1 creates a small module which can be loaded into a STOS from any bank, here's how it works:

LINE 10-148 tell you about the program.

LINE 100 clears the screen and opens a resolution independent window (but resolution bits must be set up properly in hardware on low end).

LEAVE ROOM: reserves a small amount of memory for the routine (400 bytes, less than 1 KB) and finds the start address.

LEAVE IN=200 read in the data and put it into the memory bank. The result from each read is added to the variable **CHECKSUM**. This allows a rudimentary error check.

LINE 280-289 provides the data for the income basis.

OK, so there is quite a lot of data and you really want this routine (don't you?) but you don't really want to type it in. To solve this problem keep the latest STOS column dist. filled in the form with the programs from the past few issues, available now from the Page 670 library.

USEFUL RAINBOWS

The next program demonstrates just how useful a Mathews monitor can be. It can make (almost) any program look closely with just a simple `CHILD` command. It may even do a new version of Treasure Search to take advantage of `STL`. Type in **PROGRAM 9**, then to have it work:

LINEA 90-120 just tell you what a generally brilliant person Anthony Hopkins is for wearing such a weird costume.

LINE 170 sets up the screen
LINE 175 removes the currency bank and
loads in the monthly saved values you can
PROGRAM I have did two sets

© 2004 Blackwell Publishing Ltd, *Journal of Internal Medicine* 255: 103–110

[illegible]

Program 1 - a machine code rainbow scrolling module

AN INTERLUDE

A short interlude before the next program, it did duly return to the in-line **APPLICATION** external video speed generator for STYCO (this issue had earlier hastily after looking at the module it seems a little too big to publish as a listing (about 200,000) so I have put it in the second STYCO volume disk (available from the usual place). If enough people buy it I will include a small version in a

BACK TO THE PROGRAMS

The last program for this issue is a real corker (it should be, I mean lol!). Basically it allows you to paste sprites on the screen. In something that the programmers of Fun School 3 needed so that they could create sheets of animation to port over to other machines, so I obliged and wrote this. To use it you just load a sprite bank (the 'L' key) and cycle through the sprite bank (the 'A' and 'S' keys) plotting the sprites onto any part of the screen you wish (by pressing the left mouse key and then the right), you can then save the screen (press 'O'). The program also includes some very interesting 'tricks' into the sprite bank, here's how it works.

LINE 180 sets up initial sprite number and reserves a screen bank for the units reserved.

LINE 180 does a few jumps to set up the screen, load a sprite bank and cycle the information needed about the sprite bank.

LINE 170 changes the mouse to the image of the first sprite.

LINE 180-250 do the important bits of checking the keyboard and mousekeys.

LINE 270 loads the start of the sprite bank (past the header information).

LINE 300-380 load the x and y co-ords of a sprite determined by the variable `apoint`.

LINE 400-410 find the x and y footprint of a sprite determined by the variable `apoint`.

LINE 420 sets up the mouse limits.

LINE 470 grabs the screen before saving it with the file selector.

LINE 480 changes the mouse back to the appropriate sprite if a sprite bank is not loaded and then restores the screen.

LINE 490 loads the new sprite bank, gets the sprite palette, finds the number of sprites, changes the mouse to the first sprite and then calculates the sprite information.

LINE 500 pushes the sprite palette into screen 0.

LINE 510 restores the old screen (unless it if you want).

LINE 550-560 load into the sprite bank to find out the palette.

LINE 600 grabs a copy of the screen and changes the mouse back to normal. It then pops up a file selector and after typing something restores the screen back to normal.

LINE 610 jumps back to the main program if no name was typed in.

LINE 620 saves the screen to disk.

LINE 670 gets the x/y coordinates of the mouse.

LINE 680 grabs the screen before we plot the sprite (used for undo mode), the sprite is then positioned and passed onto the screen using PUT SPRITE. A box is then drawn around the sprite.

LINE 730 copies the screen into bank 0, the colour is then pulled into the area in bank 0 that stores the colour palette.

LINE 770 this bit does the poking.

LINE 810 copies screen 0 back to the physical screen.

That's it, I hope you find the program as useful as I know many people have found it over the past few weeks.

OOPS, MR EDITOR!

Hey, before I pop back into memory land did anybody notice the slight mistake in the last issue? Quite a few people who have written to me commented on my rather unusual spelling of 'thirteen', this is due to the fact that I usually spell disk as '3.5' (oops!) with a 'C', but S.A.U.I. prefers to use the more unique way of spelling disk with a 'K' (still with one!). Anyway to cut a long story about a slight mistake obviously occurred with the Search/Replace functions of the great old word processor. Apologies to those who thought I may have been to writing the English dictionary.

SIGNING OFF

Thanks to Sandra Sharkey (all round amazing person) for the collection of PD disks, they are always brilliant! That's it for this time, if you want any of the new STOS PD-disks they include games, demos and loads of sample Global content.

```

100 .....
110 .....
120 .....
130 .....
140 .....
150 .....
160 .....
170 .....
180 .....
190 .....
200 .....
210 .....
220 .....
230 .....
240 .....
250 .....
260 .....
270 .....
280 .....
290 .....
300 .....
310 .....
320 .....
330 .....
340 .....
350 .....
360 .....
370 .....
380 .....
390 .....
400 .....
410 .....
420 .....
430 .....
440 .....
450 .....
460 .....
470 .....
480 .....
490 .....
500 .....
510 .....
520 .....
530 .....
540 .....
550 .....
560 .....
570 .....
580 .....
590 .....
600 .....
610 .....
620 .....
630 .....
640 .....
650 .....
660 .....
670 .....
680 .....
690 .....
700 .....
710 .....
720 .....
730 .....
740 .....
750 .....
760 .....
770 .....
780 .....
790 .....
800 .....
810 .....
820 .....
830 .....
840 .....
850 .....
860 .....
870 .....
880 .....
890 .....
900 .....
910 .....
920 .....
930 .....
940 .....
950 .....
960 .....
970 .....
980 .....
990 .....

```

Above: Program 3 - a demo using the rainbow routine

Right: a routine for pasting sprites

```

1000 1000 .....
1010 1000 .....
1020 1000 .....
1030 1000 .....
1040 1000 .....
1050 1000 .....
1060 1000 .....
1070 1000 .....
1080 1000 .....
1090 1000 .....
1100 1000 .....
1110 1000 .....
1120 1000 .....
1130 1000 .....
1140 1000 .....
1150 1000 .....
1160 1000 .....
1170 1000 .....
1180 1000 .....
1190 1000 .....
1200 1000 .....
1210 1000 .....
1220 1000 .....
1230 1000 .....
1240 1000 .....
1250 1000 .....
1260 1000 .....
1270 1000 .....
1280 1000 .....
1290 1000 .....
1300 1000 .....
1310 1000 .....
1320 1000 .....
1330 1000 .....
1340 1000 .....
1350 1000 .....
1360 1000 .....
1370 1000 .....
1380 1000 .....
1390 1000 .....
1400 1000 .....
1410 1000 .....
1420 1000 .....
1430 1000 .....
1440 1000 .....
1450 1000 .....
1460 1000 .....
1470 1000 .....
1480 1000 .....
1490 1000 .....
1500 1000 .....
1510 1000 .....
1520 1000 .....
1530 1000 .....
1540 1000 .....
1550 1000 .....
1560 1000 .....
1570 1000 .....
1580 1000 .....
1590 1000 .....
1600 1000 .....
1610 1000 .....
1620 1000 .....
1630 1000 .....
1640 1000 .....
1650 1000 .....
1660 1000 .....
1670 1000 .....
1680 1000 .....
1690 1000 .....
1700 1000 .....
1710 1000 .....
1720 1000 .....
1730 1000 .....
1740 1000 .....
1750 1000 .....
1760 1000 .....
1770 1000 .....
1780 1000 .....
1790 1000 .....
1800 1000 .....
1810 1000 .....
1820 1000 .....
1830 1000 .....
1840 1000 .....
1850 1000 .....
1860 1000 .....
1870 1000 .....
1880 1000 .....
1890 1000 .....
1900 1000 .....
1910 1000 .....
1920 1000 .....
1930 1000 .....
1940 1000 .....
1950 1000 .....
1960 1000 .....
1970 1000 .....
1980 1000 .....
1990 1000 .....
2000 1000 .....

```

Page 6 publishing for a full list of their excellent software. If you want to know more about the Keweenaw STOS disc source code give them a bell on 02234 432418.

What the heck, while I'm plugging every company under the sun I might as well mention my old mate (over) Potongli whose STOS club has now reached 700 members. If you want more information

drop him a line at 1 LLOYD MEER, WILKINSON TALLIES, HAINSTABLE, NORTH DEVON, EX20 0BW and mention how to give me a mention (please!!!)

Okay have fun and I'll speak to you in the next issue (perhaps I'll give you a report on what Manchester got up to at the European Computer Entertainment Show).

STOS

from PAGE 6

With all this STOS wants you to enjoy the delights of STOS with these special offers

STOS BASIC

The programming language you need to get started
Recommended price £29.95
OUR PRICE £21.95

STOS MAESTRO PLUS

Add your own sampled sounds with this cartridge and software package
Recommended price £89.95
OUR PRICE £49.95

STOS COMPILER

Turn your programs into ultra fast machine code
Recommended price £19.95
OUR PRICE £14.95

STOS SPRITES 600

Add this collection of sprites to your programs
Recommended price £14.95
OUR PRICE £9.95

GAMES GALORE

Or just play some great games written by others
Recommended price £14.95
OUR PRICE £14.95

All these offers available to readers of NEW STOS 6000: Non-Page 6 Publishing Use the order form on page 69 in order to PAGE 6, P.O. Box 14, Stafford, ST14 1SR. Credit card orders accepted by telephone on 0245 215606 or by FAX on 0245 54655

Write to Peter Hickman
at
36 CLEVERLEY ESTATE
WORMHOLT ROAD
LONDON
W12 0LX

NEW

PAGE 6 PUBLISHING's

ATARI

USER

Issue 47 £1.95
December/January

PLAYER 1
9 4 26 3 38
XL/XE

ACE DRIBBLER AND THE ROADHOGS

A zany knockabout game

**NEW SOFTWARE
BARGAINS**
LOTS MORE

ST FILE

**PUBLIC
DOMAIN**

GAMES ... GAMES ...
GAMES! THE BEST!

NAVIGATION WITH FS2
SANTA'S REVENGE - Type-in

RECORDING SOUND
FROM YOUR ATARI

TRYING OUT COMMS
FOR THE FIRST TIME

1020 PLOTTER DUMP

**FUN SCHOOL 3 - REVIEW AND READERS OFFER
NEODESK 3 - BETTER THAN EVER!**

**TCB TRACKER - FROM THE CAREBEARS
FRACTAL MUSIC - YOUR ST COMPOSES IT!**

SHADOW OF THE BEAST - MAGIC FLY - DAYS OF THUNDER



PeterHickman's

STOS

COLUMN

**OVERCOMING
DISASTER
PETER HICKMAN
BRINGS YOU ...**

**NEWS OF ...
BETTER MUSIC
A NEW
SQUASHER ...**

**AND ...
A SOUND TO
GRAPHICS
ROUTINE**

Twas the night before Sunday and all was still, not a mouse, not a joystick stirred. I switched on the STE to communicate with a couple of Bulletin Boards and to my amazement the computer did nothing, no power light, no disk drive whirr - it was dead (gasps of shock and horror!).

No that wasn't an extract from my latest attempt at hitting the best sellers list, it was all true! For the last four weeks I have been operating without an Atari ST, which of course means that I am four weeks behind on answering all your letters, contacting all the people who appeared in the last column, judging the STOS competition (yes, I really am jinxed) and finally I haven't had a chance to send Page 6 my latest lot of STOS PD software. I have had my Amiga to work with (so I haven't starved or stagnated) but I still haven't found any decent word processors on that computer at all. Still I have the good old STE back now (thanks to SDL, the trade arm of the Silica Shop), but I am short on time so this column may be slightly smaller than usual.

QUALITY MUSIC

Talking of the Amiga, you may (or may not) know that even if it doesn't have our wonderful Midi ports it does have a superb sound chip and has given rise to an awfully large collection of musical masterpieces created with various programs. What has that got to do with us? Well also on the Amiga is that wonderful language AMOS which just happens to support such tunes (you have to convert them to fit into an AMOS music bank, but that's no real trouble). Anyway Francois Lionet has recently been working on a program that converts AMOS music banks to a format which STOS can use (with the help of a new extension he is writing), details are still sketchy but doesn't it sound excellent?

WHAT REVIEWS?

I did have a couple of reviews lined up for this issue, the first was a new (well nearly) budget release by Atlantis Software, the game is Skystrike Plus which I originally reviewed quite a while ago, I'm not sure of the price or what sort of packaging has been done 'cos they ain't sent me a copy yet (am I using too much slang? Cor blimey guvnor where's me jelly eels, running up them apples and pears can really make yer pins feel knackered!). The second release is a new art package by Terry Mancey and Kevin Hearson, but this is currently being revamped a tiny bit so we will leave that for next time (it should be out by the time your read this).

On the subject of Terry Mancey (smooth links this issue, huh?) he has been working hard on a new disk based magazine for programmers called ST PROGRAMMER. At the time of writing I have yet to see an issue but he promises lots of STOS programs so it may be worth a look. You can contact Terry through Stallion Software on 0752 500312 (that's in Devon for all you phone freaks). We will have a Machine Code routine from Terry in the next issue, I cannot tell you what it is 'cos it's a surprise but tune in next time for the best thing STOS owners have had since STOS Squasher.

CUE SQUASHER

As you are all aware STOS Squasher (this is really good I think I'm on a roll here!) is the most essential thing any STOS owner should have, and if you came along to the European Computer Entertainment Show you would have been lucky enough to see it's authors, Darren Ithell and Bobby Earl. Darren has just sent me a lovely little routine which

continued on page 72


```

10 rem *****
20 rem * SOUND_0 version 2 *
30 rem *
40 rem * The SOUND mOnitor *
50 rem *
60 rem * By Daniel Spooner *
70 rem *****
80 rem
90 rem '90
100 rem
110 rem ***> LOAD MUSIC FILE
120 rem
130 F$=file select$("*.*MBK", " CHOOSE MUSIC FILE TO PLAY! ")
140 if F$="" then end
150 erase 3 : load F$,3
160 rem
170 rem ***> CHECK MUSIC AND GET NUMBER
180 rem
190 if leek(start(3))<>$13490157 then print : print "This in not a MUSIC bank!"
: print : print : end
200 key off : curs off : hide on : mode 0
210 home
220 input "Enter Music To Play :";MUS
230 on error goto 590
240 music MUS : music off
250 on error goto 0 : hide on : palette $0,$0
260 rem
270 rem ***> SET UP THE SCREEN
280 rem
290 clw : scroll off : locate 0,0 : auto back off : under on : centre "SOUND_0"
: under off
300 locate 0,2 : centre "by D.Spooner in STOS!"
310 ink 1 : box 0,10 to 40,187 : locate 0,24 : print "1 2 3 VOLUME"
320 box 65,30 to 300,180 : locate 20,23 : print "WAVE FORMS" : locate 7,6 :
print "1" : locate 7,12 : print "2" : locate 7,18 : print "3"
330 def scroll 1,80,31 to 303,179,-2,0 : palette $0,$777,$700,$70,$7
340 rem
350 rem ***> MAIN LOOP
360 rem
370 music MUS : X=psg(0)/2 : plot 208,30+X : repeat
380 rem
390 rem ***> WAVE FORM READINGS
400 rem
410 X1=psg(0)/8 : X2=psg(2)/8 : X3=psg(4)/8
420 ink 1 : draw 270,30+OLDX1 to 270,30+X1 : ink 2 : draw 270,80+OLDX2 to
270,80+X2 : ink 3 : draw 270,130+OLDX3 to 270,130+X3
430 OLDX1=X1 : OLDX2=X2 : OLDX3=X3
440 scroll 1
450 rem
460 rem ***> VOLUME READINGS
470 rem
480 X4=psg(8)*10 : X5=psg(9)*10 : X6=psg(10)*10
490 ink 0 : draw 8,187-OLDX4 to 8,187
500 ink 1 : draw 8,187-X4 to 8,187 : OLDX4=X4
510 ink 0 : draw 16,187-OLDX5 to 16,187
520 ink 2 : draw 16,187-X5 to 16,187 : OLDX5=X5
530 ink 0 : draw 24,187-OLDX6 to 24,187
540 ink 3 : draw 24,187-X6 to 24,187 : OLDX6=X6
550 until inkey$<>" " : default : end
560 rem
570 ***>error
580 rem
590 print : print "----> Music Not Defined!"
600 print
610 resume 220

```

STOS

from PAGE 6

NEW ATARI USER wants you to enjoy the delights of STOS with these special offers

STOS BASIC

The programming language you need to get started

Recommended price £29.95

OUR PRICE £21.95

STOS MAESTRO PLUS

Add your own sampled sounds with this cartridge and software package

Recommended price £69.95

OUR PRICE £49.95

STOS COMPILER

Turn your programs into ultra fast machine code

Recommended price £19.95

OUR PRICE £14.95

STOS SPRITES 600

Add this collection of sprites to your programs

Recommended price £14.95

OUR PRICE £9.95

GAMES GALORE

Or just play some great games written by others

Recommended price £19.95

OUR PRICE £14.95

All these offers available to readers of **NEW ATARI USER** from Page 6 Publishing. Use the order form on page 49 or write to PAGE 6, P.O. Box 54, Stafford, ST16 1DR

Credit card orders accepted by telephone to 0785 213928 or by FAX on 0785 54355

**Write to Peter Hickman
at
36 CLEVERLEY ESTATE
WORMHOLT ROAD
LONDON
W12 0LX**

is compatible with the Unsquash command in Squasher and packs samples with a much better compression ratio than the ordinary Squash command. I'm not sure what is going to be done with it at the moment, so I'll let you know next time (it's going to be really busy in the next issue!).

JUST ONE PROGRAM

Before we look at the only program for this issue (sorry but I have deadlines to adhere to), Richard - I'm not a cat beater - Vanner (Mandarin's Development Manager) has reminded me to tell you about the new STOS upgrade which is now available, it adds compatibility for the very latest TOS revision (1.62 I believe). It also means that for those of us who have written PD software and have a conscience will now go and re-compile and re-squash our programs (sob, sob, another two hours gone).

Ok the only program for this issue is from Daniel Spooner, a regular contributor to this column. Daniel has come up with a way of producing a VU-Meter type display from a piece of STOS music using the PSG0 function. It's quite short and really easy to follow so here goes...

HOW IT WORKS

Lines 10-100 - tell you that Daniel is a pretty amazing person

Lines 110-150 - load a piece of music into the music bank. I used the music from the STOS accessories disk when I first tried this program

Line 190 - looks at the beginning of bank 3 for the first four bytes (a long word), if the number found is different to \$13490157 then the bank which has been loaded is not a piece of STOS music

Lines 220-250 - let you pick the piece of music you wish to play

Lines 270-340 - set up the initial screen display, including a scroll zone for the

waveform generation (yep it does that too!)

Line 410 - passes the waveform information into the variables X1, X2 and X3

Line 420 - draws the current part of the waveforms and scrolls the zone

Line 480 - passes the volume of each sound channel into the variables X4, X5 and X6

Lines 490-550 - generate bars on the screen depending on the volume of the channel

Ok what do you think, neat huh?

HOW ABOUT ADDING MORE?

Now you know how to find out the volume of a channel how about writing a similar routine that uses dancing sprites? Or perhaps some form of light show that increases the brightness of the colours displayed if the music gets louder?

NEXT TIME

Oh well, I'll have to go now. Before I do let me remind you about a couple of events coming up, first is the Computer Shopper Show (6th-9th of December). Mandarin have their usual mega stand with loud Stereo, gigantic monitor and loadsa seats. I'll be there, and so will Aaron Fothergill showing off lots of new stuff. Richard Vanner says there will be demonstrations of STOS/AMOS 3D as well as Fun School 3 and a new program which could set the educational world alight (I signed a non-disclosure agreement so I cannot say more than that!). Also coming up is the third 16 Bit Computer Fair (4th-6th of January 1991). I'm not sure about Mandarin but I'm sure you will spot me hanging around anybody selling STOS stuff. The last 16 Bit Fair was a big improvement on the first one, with a lot of the larger companies (such as Psygnosis) exhibiting. See ya there folks.

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 48 February/March

XL/XE

SNAKES & LADDERS

The classic game on your computer

**BARGAIN BOOKS
and
SOFTWARE INSIDE**

DISKS -

THE WHOLE STORY
Formatting, bad
sectors, protection ...

WRITING ADVENTURES

plus ADVENTURE MAZES EXPLORED

ST FILE

**PUBLIC
DOMAIN**

THE WONDERFUL
WORLD OF MUSIC

SUPERCARD 2 - Databases made easy!

BAND-IN-A-BOX - auto accompaniment

CADAVER - GAME OF THE YEAR!

DRIVING GAMES REVIEWED



STOS COLUMN

**In which Peter
Hickman brings
you ...**

**the winners of
the STOS
competition ...**

**another review
of SKYSTRIKE +
plus ...**

**a great colour
palette routine**

Well what an issue we have this month, only one program but it is probably the most versatile listing we have published!! But for this all of that here is the news (and review).

THE WINNERS

The STOS competition, which we launched a while ago is now well and truly over. The winners should all have received the prize by now (the fact they should have dropped through the door just in time for Christmas). Of course what everybody wants to know is who won and what games they won. Well I'm not going to tell you!! No, you only find out. The overall winner is Fraser Nicholson from Glasgow who wrote an incredibly addictive version of Hunt-a-Hack. Second prize went to Luke Skinner by Colin Cooper which is a very accurate version of the old 8-bit game and third prize went to Charles (France-Smith) who wrote a STOS version of Mines 2048er (it was slightly slow but could easily pass for the original). My thanks

must go to everybody who entered, especially those who didn't win a prize and of course I must thank Richard Vassar at Mandarin and Aaron Fothergill at Shadow Software for donating the prize. Oh yes, you may be wondering what is going to happen now that STOS has been chosen to have some Christmas day appearing but rather non-appearing!! Well, Mandarins have kindly replaced the prize with the complete set of Play School 3 packages (Under 5s, 5-7s and Over 7s).



Chris Payne from Mandarins, Francois Lissac (right), author of STOS, and Peter Hickman at the Computer Shopper Show (Peter Hickman is behind the camera)

AMIGA SOUND QUALITY!

Things are looking up for STOS, remember I told you about Francois Lissac writing an extension which incorporated all of the AMOS music commands in STOS!! It works! In fact not only does it work, but it sounds nearly as good as the Amiga!! Basically the extension allows you to play AMOS music banks, or you can convert Amiga Soundtracker modules. It includes loads of new commands including VU METER which allows you to read the volume of a sound channel (all FOUR of them!) and even incorporates variable playback rates.

AND GREAT PICCIES!

STOS Vidi looks better and better. If you came along to the Computer Shopper Show on December 8th you could have actually seen me playing with both STOS and AMOS Vidi. The STOS version is the most complete and allows the user to do everything which the original SCORPIO software allows you to do and more! Some of the nice features include the ability to load and save to P11, P801, PC1, BT, T80, G20 STOS expanded printout, PAF STOS (compact) printout, and SCORPIO - all of which are automatically handled by a new extension. You can sequence your pictures into short films using a comprehensive 'Graphics Tracker' and perhaps more importantly you can drive everything using icons/Mouse buttons or keyboard shortcuts!! Although almost finished no firm release date has been set, but I'm sure you may see it appear around February/March.

Talking of the Shopper Show, did you go? Did you meet Francois Lissac? He was there, and strangely very few people wanted to speak to him! Poor old Francois, still he is committed to adding a few new features to STOS over the coming months and as usual I will keep you informed.

age that incorporates some more advanced features and is actually simpler. To run the routine you must first create a bank from the data in TABLE 1. This data must be typed into the INPUT-PALETTE program which comes on your STOS accessories disk, alternatively you

can use the enhanced version which comes on the PAGE 6 STOS DISK 1 available from the PAGE 6 PD library. Save this data onto a new blank disk (just in case something terrible happens!) and then enter PROGRAM 3.

Before I give you a line by line breakdown of the demo let me just give you some information about using the routine (which can be dangerous). The basic idea is to construct a new series of palettes for each screen. Each screen can be split into up to 100 palettes each one four deep. Each palette is made up of 16 colours and each colour value takes up two bytes in memory. So to store a set of 100 colour palettes you would need to reserve a bank 3200 bytes long (16 colours * 100 palettes * 2 bytes per colour) plus another 2 bytes to store a swap value for the machine code to recognise. For this demo I am going to split the palette once every four lines which means I only need to reserve a bank 8000 bytes long (16 colours * 50 pairs * 2 bytes * 2).

HOW IT WORKS

LINE 840 Sets up a temporary bank to store our colour palettes.

LINE 840 Starts a loop to fill the bank with colour data.

LINE 841 Takes a random number for each possible colour. Incidentally you can actually go up as far as \$FFFF for colours of the STC (lots of later colours!).

LINE 842 Loops back.

LINE 840 Puts a marker at the end of the palette data for the machine code to recognise that the bank has ended.

LINE 840 This line sets up the routine, you must pass some variables to the machine code for it to function properly.

Arg00 must always hold the start address of the bank where the palette data is stored.

Arg01 tells the routine how often to

swap palette for the screen. Here, you must always add 1 to this number. For example if I want to swap the palette every four lines I must pass five into Arg01.

Arg02 lets you start the changes to the screen at any line from 1 to 100.

Arg03 is a control register for the routine, you pass 0 into it and then call the routine it starts, if you pass 1 into Arg03 the routine stops swapping palettes!

LINE 840 Calls the routine, waits for a key and calls it again to order to stop it.

Well what do you think of that? How bad? I do love STOS.

THE STOS CLUB

Right now, before I give all let me just tell you about the STOS club. If you are interested in receiving a bi-monthly newsletter (which by a short coincidence is published in between issues of New Atari World) then give Aaron Rothwell a ring on 0371-33544, tell him where you found out about the STOS club, then and join up!

SKETCHBOOK is available from
ATLANTIC SOFTWARE
38 STATION ROAD
LONDON SE22 8AG

ST PAINT MASTER is available from
ARTISTS DESIGN
30A SCHOOL ROAD
TILFURNY
MILWAUK
BIRMINGHAM B15 2AN

You can write to me as follows:
PETER NICHMAN
36 CLEVELAND ESTATE
SPRINGFIELD ROAD
LONDON
W12 0LX

STOS

from PAGE 6

NEW ATARI USER wants you to enjoy the delights of STOS with these special offers.

STOS BASIC

The programming language you need to get started.
Recommended price £35.95
OUR PRICE £21.95

STOS MAESTRO PLUS

Add your own sampled sounds with this cartridge and software package.
Recommended price £69.95
OUR PRICE £49.95

STOS COMPILER

Turn your programs into ultra fast machine code.
Recommended price £19.95
OUR PRICE £14.95

STOS SPRITES 600

Add this collection of sprites to your programs.
Recommended price £14.95
OUR PRICE £9.95

GAMES GALORE

Or just play some great games written by others.
Recommended price £19.95
OUR PRICE £14.95

All these offers available to readers of NEW ATARI USER from Page 6 Publishing. Use the order form on page 48 or write to PAGE 6, P.O. Box 24, Salford, S7 4 1QH. Credit card orders accepted by telephone on 0765-370000 or by FAX on 0765-34000.

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 48 £1.95
April/May

XL/XE

DRAGON CASTLE

**Rescue the
Princesses!**

**MORE BARGAIN
SOFTWARE
INSIDE**

PERSONAL AUTOBOOT

*Give disks the
personal touch*

ST FILE

**PUBLIC
DOMAIN**

UTILITIES YOU CAN'T
GET COMMERCIALY

PROFLIGHT

- A RIVAL TO FS2 AT LAST!

COPYIST - Printing Music Scores
MIDISTUDIO - A real Bargain!



NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 50 £1.95

June/July

XL/XE

INVADERS

**In Turbo
Basic**

**PAGE 6
WRITER**

**A fully featured
type-in
word processor**

**LATEST SOFTWARE
BARGAINS
INSIDE**

A-Z OF ATARI SOFTWARE

A NEW SERIES OF MINI-REVIEWS BEGINS

ST FILE

**PUBLIC
DOMAIN
ALTERNATIVE
DESKTOPS**

SAMPLING • a new series
MASTER TIME • great education
STOS • incredible type-in demo
MIG-29 • latest flightsim



STOS

COLUMN

Welcome to another great issue of New Start User's STOS Column (by the way, did you know that this is the only magazine you can buy off the shelf that supports STOS?). I am writing this a couple of weeks before the Computer Shopper show as I know for a fact that Harakatsu will not be there 'cos they are busy meeting others somewhere nice and big I hear!

Since you will not get this issue until after the show it is a bit pointless talking about it, but in case you were there did you spot the guy with the pony tail talking to a bearded old lady and a fellow who looks as if he were fitting a wetsuit? Don't! One of those there is me, but which one? In two months time time to do the next exciting instalment of "PICTURES FROM THE MIRROR SHOW" where you can find out my true identity.

Enough then, STOS 3D is almost complete (and should be finished enough for a review for the next issue of then again). STOS Vals is complete (thanks to my mate Tony Mancey who co-wrote and designed it with me) but it's future is undecided at the moment and finally there is a STOS ME extension available soon (I haven't seen it yet but Aaron Pethergill of the STOS club tells me it lets you access the files, run graphics ports, new sound sample control and loads other bits and pieces).

COMING SOON ..

As the traditional summer slump for the computer industry approaches the time for software development begins. Fun School 4 is in the early stages of production and should be out for the ST in September-ish. I have some some early previews and it looks pretty good. Another package that is being fired up for release soon is called Fido Carnival, release dates are uncertain (I might make it out before the summer) and this new look even better than Fido Fetch is quite a treat. However tell me that Edie Carmichael is the start of a new range of educational software, I can't wait to find out more!

A REAL CRACKER!

We have one real program now, but how what a program it is! Here you can look at these brilliant clones with the 3D shapes made out of different coloured balls? I have and always wondered how they could calculate the positions of the balls that quickly, but then the secret was revealed - THEY CHEAT! If you pre-calculate the positions of the balls the every time they will be plotted you can store the values in memory and get away with murder!

The program we have here has been written by STOS vice kid Richard Gade (a Richard). It comes in 3 bits and you really need a freshly formatted disk to store the stuff as you don't want to type it in and find out there is no way to save it. The object that will be drawn is a nice big Helicopter which rotates and spins at its own pleasure.

Now you must type in that nice long upper half TABLE 11 into the INPUTS program stored on your STOS 3D extension disk (all instructions for using this

and a replacement for OUTDATA have been published in a previous issue). Save the upper half as a file called "HELISP.MEM".

Okay, close that and save it? Now type in PROGRAM 1 and wait for a while. It will generate 40 frames of the helicopter and will store the values in bank number 10. After it is finished the program will save out the bank as HELISP.MEM.

I won't do a translation of the program 'cos it's a pretty complicated thingy (I'll try to do a nice simple one for the next issue so that I can reveal how to create your own shapies).

Okay now type in PROGRAM 3, which is the program which will display the finished object. It looks the two banks we have just created so remember to make sure they are on the same disk, that it and be honest Okay so it runs a little bit slowly, but if you own a copy of the STOS Computer it really goes along.

SAVING SPACE

Well, as you may have noticed the programs are slightly bigger this time so that's all for this issue.

If you want to find out more about the STOS club write to:

Aaron Pethergill
1 LOWER MOOR
WHIDEN TALLEY
BARNSTABLE
NORTH DEVON
EX32 6SW

or phone
0271 23244

Remember to tell him where you heard about the STOS club!

Left - Listing 1 which continues with the second column overleaf - don't forget to type the rest in!

[illegible]

[illegible]

NEW

PAGE 6 PUBLISHING'S

ATARI

XL/XE

USER

Issue 51 £1.95

August/September

RADZONE

THINK QUICKLY TO AVOID
THE RADIATION

BARGAIN SOFTWARE
FOR YOUR XL/XE
FROM JUST 99p!



A-Z OF ATARI SOFTWARE

More Collectors Items

ST FILE

DISPLAY LISTS

How To Create Them

ST EDUCATION SPECIAL
SHOULD YOU BUY THE
LATEST DISNEY SOFTWARE?
MATHS PROGRAMS TESTED
HAT SOFTWARE - ANY GOOD?

plus... TRADITIONAL GAMES ON YOUR ST
EMULATING
THE XL/XE!
SAMPLING -
the Technical side



STOS

COLUMN

A great arcade classic type-in

Hello, STOS breaks and welcome to another exciting mixture of news, programs, contest news and even more news! Actually I was thinking that this issue was going to be full of doom and gloom, STOS 3D still has not arrived although *Hardware* assure me it is so close to release you can smell it! Maybe a review next time. *Hardware*! I have saying that for over a year!

Fortunately gloom and doom are not persistent on this glorious chain they are a nice letter together with a prize (review) has just popped through my door. The letter is from Fraser Newham (the guy was the little computer which we run a while back) who together with fellow students from ELTHAMPTON COLLEGE (ELTHAMPTON COLLEGE, Woking, Surrey, Jodi Carr, Graham West, Gail Reed and Rita Shepherd has won a mega award. The competition was the EUROPEAN MICRO INFORMATICS

AWARD and the team came up with a file system for controlling text, ventilation and lighting in the home via a DEC machine file, so actually is perfect. Where does the ST come into this? Well, to make the system truly flexible Fraser wrote a speech recognition program using STOS and the STOS MASTRO cartridge which he won in the STOS competition, amazing isn't it? Anyway Fraser has written to me asking if I know of a way to control a current via STOS and the ST, well I must admit to being pretty techy ignorant (as the old jock goes - How many computer programmers does it take to change a lightbulb? The answer is none! It's a hardware problem!) so if anybody out there who can help integrate the whole system around a single ST rather than using a myriad of different machines for different tasks drop me a line and I will pass on your letter to Fraser and the team (as and by the way they have been asked to deliver their title next year in Copenhagen! Good

luck!).

Oh, another bit of good news is that ex-Manchester engineer Nick Harper seems to have found a publisher for his STOS game *CRUSOE*. These nice people at Electronic Zoo are very interested and are currently talking to Nick about a late summer release! Just as a point of interest Electronic Zoo also published *Nathan* which was written by the same team who are doing STOS/AMIGAS 324.

Over the past few months I have been in contact with a very nice chap named Terry Guy. Now year-old Dick has been sending me regular issues of what was a new publication (magazine devoted entirely to STOS, unfortunately they always arrived just after I had finished writing the column and by the time the next one came round I had forgotten all about it. Sorry Dick). This time I have announced that another type will be written. THE STOS MASTRO covers six philosophical (and double sided) staples 84 sheets together with a disk full of programs. The paper part of the magazine is mainly concerned with providing breakdowns of the disk based programs, as well as some reasonably interesting tutorials from people such as prolific PD author Ralph Effner. The price is £1.95, which I think is quite reasonable and considering that STOS covers are starved of such publications it might be an idea to check it out (full address at the end of the column).

Aaron Pathwell has just finished putting together the latest issue of the official STOS newsletter, and it's not too bad at all. One of the main points for new subscribers to consider is that Aaron has prepared a disk for this "special" issue which contains lots of STOS extensions, including a couple of BASIC specific ones!! I have not seen them yet but I'll tell you what they do next time around.

While on the subject of Aaron Pathwell, the company which publishes his brilliant game *MASTRO PLUS*, have you got your copy yet? I has just released another STOS number. Written by John Shepherd (with neat graphics by Rhonda Muller) the game is an arcade adventure which looks incredibly like an old ZX Spectrum game. — Trust me when I say



Accred. winning pupils from Hutchinson's Grammar School. One of these kids is our STOS competition winner Fraser Newham. But which one is Peter Hickman?

Continued on page 73

that the game is a little tricky to get used to (even it's so hard) but if you don't buy it you must be stark raving bonkers because believe's that fresh crowd.

AN ARCADE CLASSIC

Program time! Nick Harper (second fixture!) has written a handy clone of the old arcade classic *Centipede*. There are two parts to the program, the first is the update data (TABLE 1) which you must enter using the *PERMANENCE* necessary which came with *STOS* for the replacement published in this magazine many moons ago, and the second is the actual program. Once typed in it may be best to compile it if you own a copy of *Masterline STOS-Compiler*. This will really make the program whole again. Unfortunately the listing is quite long so this is the bit where I say goodbye. If you were wondering about the pointed photo of myself and Karen (though I know you), well I have it here but I think I'll let you wonder a little bit longer before revealing my face to the masses (just prepare yourselves - I am sure talking that photo damaged my career).

The *STOS* Magazine can be found at:

**STOS MAGAZINE,
15 KNOX CRESCENT, DINKSHOP
WALFHAM, BANTS, SO5 1DE**

If you want an issue make out a cheque - payable to **WINDLEY PUBLICATIONS** for £1.00.

The official *STOS* CLUB can be found at:

**STOS CLUB, 1 LOWER MOOR,
WEDDON VALLEY, BARNETABLE,
NORTH DEVON, EX36 5NF**

Subscriber enquiries can phone 0371 23544 (quoting this issue of *NAI*)

Finally I can be found happily chugging up a magic phone bill at the following address (and if you are going to write to me don't bother about assuming that *NAI* doesn't offer good value for money and I should move onto a better magazine 'cos you will end up in the bin, even if you do send an S.A.E. ok? - this remark is specifically aimed at Michael Stone who quite kindly also contacted about *Masterline*. Happy *STOS* support!)

**PETER HICKMAN
35 CLEVELY ESTATE
WORMHOLT ROAD
LONDON
W12 0LE**

0371 23544, 0371 23544, 0371 23544
0371 23544, 0371 23544, 0371 23544
0371 23544, 0371 23544, 0371 23544

Table 1		Table 2										Table 3										Table 4										Table 5									
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1	Table 5.2	Table 5.3	Table 5.4	Table 5.5	Table 5.6	Table 5.7	Table 5.8	Table 5.9	Table 5.10
Table 1.1	Table 1.2	Table 2.1	Table 2.2	Table 2.3	Table 2.4	Table 2.5	Table 2.6	Table 2.7	Table 2.8	Table 2.9	Table 2.10	Table 3.1	Table 3.2	Table 3.3	Table 3.4	Table 3.5	Table 3.6	Table 3.7	Table 3.8	Table 3.9	Table 3.10	Table 4.1	Table 4.2	Table 4.3	Table 4.4	Table 4.5	Table 4.6	Table 4.7	Table 4.8	Table 4.9	Table 4.10	Table 5.1									

END OF FILE

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 52 £1.95
October/November

XL/XE

BAT PACK

**BILL HALSALL'S
NEW GAME**

**THE HISTORY
OF THE WORLD**
(as it relates to Atari)

**BARGAIN SOFTWARE
FOR YOUR XL/XE
FROM JUST 99p!**

ALL ABOUT STRINGS

How to improve your programming

ST FILE

TRADITIONAL GAMES ON THE ST

Famous games like GO and BRIDGE -
are the computer versions any good?

MASTER CAD

Can a low cost package deliver?

STOS - an all round configuration
program to type in

plus.. **PUBLIC DOMAIN GAMES**

SAMPLING

using Quartet



PeterHickman's

STOS

COLUMN

At a very quiet time for STOS related news, Peter Hickman brings you a super utility to customise the way you boot up your Compiler or Interpreter

Hello STOS user's, here are things? Well you will be pleased to know that AMOS 3.2 is finally in the shops, which means that the STOS version is not far behind. I am told it should be available by around October-fifth, hopefully it should prove it to be a useful addition to the STOS range of products.

Unfortunately that seems to be about the only real STOS news, unless you know different of course. If you do have any interesting hints, tips, or variations users for STOS why not send me a line I'm sure that other users would love to hear about them. Ohhh, one small thing is that I have just returned from European HQ in Macclesfield to attend a little celebration in honour of the AMOS 3.2 launch, thanks to David Thomas and Richard "Cat Killer" Yaxner for putting my train and I up for the night, and of course to Mark Common for Lunatic! I haven't had the photo's developed yet but I promise I'll show you some real time!

THE ULTIMATE STOS BOOTER

Only one program again this issue, but it is a useful one. Tony Macey (who is currently putting the finishing touches to some of Fun School 4) has come up with a wonderful program to alter the way STOS boots up. You can choose what Compiler or Interpreter extensions to load at run time, whether you want floating point switched on or off, in fact you can control almost every part of STOS before you load it! For this reason it is best that you compile this program. Anyway follow these instructions and you will have a nifty little program at your disposal!

1. Type in PROGRAM 1.
2. Save it onto a new blank disk with plenty of room.

3. Compile it and store the resulting program in the AUTO folder of your STOS hard disk (remember to call it "STOSBOOT.PRG").
4. That's all!

Now when you boot your STOS disk the STOSBOOT program should load first and you can create your own customised version of it and you should remember to save it to protect the disk as the STOS-BOOT program does a little reformatting of files to achieve it's intended effect.

THE STOS MAG

Don't Guy has sent me the latest issue of his STOS Magazine, it includes quite a few interesting programs on the disk. One of the most useful is a utility to store up to 15 compressed pictures in one bank! You can find out more by contacting Guy (see p. 4).

STOS MAGAZINE
11 SHORE CRESCENT
BISHOPS WALTHAM
HANTS
SO9 1DE

Oh well that's it for this another issue, next time check out the new article about board covers. Yes it's free but only with the STOS column! I am good to you or what?

Write to Peter Hickman at the following address

PETER HICKMAN
24 CLEVERLY ESTATE
WORMHOLT ROAD
LONDON
W12 0LE

NEW**PAGE 6 PUBLISHING'S**

ATARI

USER

Issue 53 £1.95

December/January

XL/XE**DICE! and
DROIDZ!****DICE**
By John Young**THE HISTORY
OF THE WORLD**
(the saga concludes)

Two great

type-in listings

TWOES
THREES
FOURS
FIVES

add ones only	3
add twos only	
add threes only	9
add fours only	16
add fives only	
add sixes only	12

**BARGAIN SOFTWARE
FOR YOUR XL/XE
FROM JUST 99p!**

S. DE A KIND

KEYBOARD INPUT

How to interact with your Atari

ST FILE**MUGSHOT**Great fun but is it of
any practical use?plus ...
**INFORMATION
IN THE
PUBLIC DOMAIN****SAMPLING ...**
the professional way

THE STOS COLUMN

**Peter Hickman
says farewell
and we
welcome a
new STOS
columnist
Dion Guy
who this issue
brings you
two type-in
listings to
enjoy**

GOODBYE! ...

Hello STOSers-everywhere. This is your intrepid programmer speaking to you directly from the Himalayas. I have finally decided to settle down and get a cure of my own away from the hands and hounds of madness life. Actually after the 10th issue with the two main in the last issue I thought I had better take a long holiday. Yes, I'm probably mad!! Only joking, but as I am sure you have gathered by now this is a short paragraph that I have put together to say goodbye to you all, but don't worry STOS expert Dion Guy has kindly offered to take over the STOS column and will be flexing his word processor as you for many moons to come. Before I pop off back into fantasy land I would just like to say thank you to all those people who have made this STOS column work over the past two years, thank you to Les Ellingham for the big break (and the rest of the Page 9 Publishing team for putting up with me) and finally thanks to all at Manchester (now Ex-sports) Software including Francois Lancel, Michael Vautier and Chris Payne.

My last duty before departing is to contribute the saga of the unpublished game. Nick Hanger's "DQ&MC" should now be available from all good Public Domain stockists as checks in out!

... and HELLO!

Hi! My name is Dion Guy, welcome to my first STOS column! After that intro (which I hope by Peter there seems to be very little left for me to say! But - the column must go on!

I'm afraid there's no STOS news this issue, it seems very quiet on the STOS front at the moment, but hopefully things will pick up soon. If you have found any news or have written a mind blowing program in STOS that you want reviewing, then get in touch! Our small snippet

is that Fun Defect 4, the latest addition to the highly acclaimed educational series, should be released by now. Again the ST versions were written with STOS, I'll have a bit more info for you in the next issue. Actually, something I've always wondered is whatever happened to Fun Defect 1? The first group of packages was called Fun Defect 2! Answers on the back of a used five pence note, please.

TWO GREAT LISTINGS

In this issue we have two programs for your delectation. First up, we have a IFF picture displayer by that all round talented person - Terry Manser. Secondly, we have an excellent program by Thomas Agazzi which allows you to configure the way your computer works (meaning - last issue a STOS configure and this issue a compiler configure). Due to go in this issue also was an accessory written by Mike of me which lets you generally experiment with your ST's colour palette. We'll bring you that one next time. As space is a little tight this issue there will be no breakdown of the programs, just some brief instructions.

IFF PICTURE DISPLAYER

This handy program allows you to display IFF pictures from STOS with ease. Type it in, select the file to load and you're away!

```

10 run *****
12 run *** OFF uncompressed picture displayer - Programmed by Terry Passey ***
14 run *****
16 :
18 key off : flash off : curs off : click off : mode 0 : scroll off
20 :
22 run ***** EXAMPLE
24 show on : Fmfile select("*.OFF", " Select uncompressed OFF
picture file") : hide on : if Fm"" then default : and
26 :
28 erase 15 : reserve as data 15,32768 : block F#,15 : $OUTstart(15) :
DEF$physic : PAL,true : guess 34 : wait key : default : and
30 :
32 :
34 run *** Display OFF (uncompressed) picture
36 run * entry: $OUT=source address
38 run *      DEF=destination address
40 run *      PAL=pallete flag
42 :
44 run ***** SETUP PALETTE
46 if not (PAL) then goto A2
48 :
50 PTR=start ($OUT) to start ($OUT)+length ($OUT), "OWN" = 0
52 for I=0 to 15
54 : $peak PTR=(I*3)+0/32 : $peak PTR=(I*3)+1/32 : $peak PTR=(I*3)+2/32
56 : colour I,$PTR($0+$1+$2+$3)
58 next I
60 :
62 run ***** DISPLAY PICTURE
64 PTR=start ($OUT) to start ($OUT)+length ($OUT), "BODY" = 0
66 for Y=0 to 255-1
68 : for P=0 to 4-1
70 : : for Z=0 to (25-1)+0 step 5
72 : : : doke BODY=(Y+1*0)+P*2+Z,$peak PTR : PTR=PTR+2
74 : : next Z
76 : next P
78 next Y
80 return

```

Listing 1 - OFF PICTURE DISPLAYER

COMPILER CONFIGURER

Don't just type in this program and run it, to get it to work takes a little more effort! Firstly you must load the compiler into STOS as a basic file, NOT as an accessory. Then type in the lines of Prog: run it (carefully!). This will merge the compiler and the configure program together. Now save the modified compiler into a disk for future use. Finally, run the modified compiler and go into the options section. On page 8 you will see the word "Extensions". Click on this and a sub-menu will appear. This allows you to choose which extensions and library files to compile. Important - while compiling, make sure the disk is write enabled to allow the configure to work.

SO ENDS THE FIRST

That's all for this column. Indeed if you want to contact me, I can be found at the address below. Don't forget to include an S.A.E if you want a reply!

On a final note, if anyone out there has any STOS programs that they want to share with the world then send them in! Your listing could soon be featured in this very column (grrr)

DION GUY
STOS COLUMN
11 SHORE CRESCENT
BISHOPS WALTHAM
BANTS
SO3 1DE

NEXT ISSUE ...

A COLOUR DEFINER ACCESSORY

with which you can experiment with the various colours available from your ST. Join us for the next instalment of THE STOS COLUMN

Listing 2

overleaf

Listing 2
C
o
m
p
i
l
e
r

C
o
n
f
i
g
u
r
e

NEW

PAGE 6 PUBLISHING'S

ATARI

XL/XE

USER

Issue 54 £1.95

February/March

INDIAN GOLD

Challenging
arcade adventure

ALTERNATE REALITY

Hints and tips
plus a character
editor to order

**BARGAIN SOFTWARE
FOR YOUR XL/XE**
FROM JUST 99p!

ZORK 1

Hints and tips to solve this classic

ST FILE

TIMEWORKS 2

One of the most popular DTP
packages is enhanced and
improved - we test it out

plus...
**GREAT GRAPHICS
in the Public Domain**
**MAKING MUSIC
WITH NOTATOR**

**SAMPLING
IN STEREO**



THE STOS COLUMN

**Dion Guy
brings you two
super type-in
listings plus
reviews of two
art packages
written in
STOS only
available by
Mail Order
from the
authors**

Hello again! Prepare yourself for another fantastic issue in STOS columns, packed full of reviews, listings and generally interesting stuff. Last issue I said that if anyone wants a STOS related product (reviewing them get in touch, little did I know that I would be bombarded by millions of STOS writers' art packages! Well, maybe that's a touch exaggeration but recently I have received two different art programs in depth reviews of both packages will follow shortly, but first - the usual

As mentioned last issue, Fun School 4 is now out. I haven't actually seen the full package but I have seen a small section of the 3-11 year olds version. Without going into too much detail, I found that the package is very well put together. The graphics are of a very high standard, and the educational games have been well thought out. I would recommend any parent to invest in a copy of Fun School 4, if not for the children then for the demonstration of just what STOS is capable of.

THE LISTINGS

So, what programs have we got lined up for you this issue? Firstly, there is the colour definer accessory that was supposed to go in the last issue but was postponed due to space problems. Secondly, there is another handy program from Bitwise Artists - a sprite finder. Here are some brief instructions:

PROGRAM 1 SPRITE FINDER

Have you ever loaded in a sprite bank and wanted to find a sprite quickly and easily? Have you ever forgotten which sprite number goes with a certain sprite, and had to manually search for it using

the **SPRITE** command? Why am I asking all these questions? No seriously, we're all experienced the hassle of looking for a sprite at sometime during our programming lives. This program is the perfect solution. After typing it in, first enter it for binary use, load in a sprite bank and then run the sprite finder. From here, you simply use the mouse to find which sprite is at each sprite number.

PROGRAM 2 COLOUR DEFINER ACCESSORY

With this accessory you can experiment with the various colours available from your ST. II in painless, going into means of text explaining how to use the program, as everything is fairly straightforward. Here's how!

REVIEWS

And now - the reviews! The two art packages up for review are **EDIPED** by Bitwise Artists of IGP Software and The **Artful Doodler** by Daniel Spencer of GARC Software.

THE ARTFUL DOODLER

Upon loading **TAD** (as it shall be referred to from now on) you are greeted with a copy protection screen. I must confess I found this a bit strange for a home-grown art package. Copy protection would be understandable on something like Deluxe Paint, but I cannot help but feel that protection wouldn't be too inappropriate in any kind of home-grown software.

NEW

PAGE 6 PUBLISHING'S

ATARI

XL/XE

USER

Issue 55 £1.95

April/May

Jeff Minter's
TURBOFLEX

FOR YOU TO TYPE IN!

**PUBLIC DOMAIN
FOR THE XL/XE
A NEW COLUMN!**

**BARGAIN SOFTWARE
FOR YOUR XL/XE
FROM JUST 99p!**

CORE: 29

MIDMASTER

ST FILE

to perfect ball
to use plus ready to play on disk

FLYING!

*To fight or to fly? Two new
flight simulators reviewed*

plus ...
SPREADSHEETS
in the Public Domain
**NOTATOR'S
SCORING FEATURES**

**EDUCATIONAL
SOFTWARE**



THE STOS COLUMN

STOS 3D is here at last and Dion Guy includes a full review in his column

Swing as ever the past few months the STOS scene has been pretty quiet. I was quite surprised when a magazine looking packet arrived which contained - you've guessed it - the long awaited (and I mean long!) STOS 3D! Also I have news of another STOS written package soon to be released as Shareware - Creative Dungeoneering. Sounds interesting? Full details of that in a moment. In this issue are another two nifty listings for you to type in, a game and a utility. Anyway, as soon as right we shall commence right away with an exploration of both programs.

DICE!

A setup by the name of Peter McLaughlin has sent me a little game called Dice, he says that the game was inspired by the screen shot from John Young's 8-bit game in issue 58. Basically, Dice is a computerised version of Yahtzee. Unlike various Yahtzee clones though, this one is actual very easy to use while

still being very enjoyable. Dice is for 2 players and is mouse controlled. Even if you do not know the rules of Yahtzee you should pick up how to play soon enough.

To get Dice up and running, you must first design 12 sprites! This isn't as bad as it sounds though, all you have to do is design 2 different coloured sets of dice. Using the colour palette 000, 777, 000, 100, 000, 210, 731, 700, 000, 014, 000, 013, 014, 000, 220 for colours 0-15 correspondingly, design 6 15x15 pixel dice to draw, in the sprite bank (i.e. the numbers 1 face on sprite 1 etc.). Make the first 6 dice white (colour 0). Next copy the 6 dice to sprite numbers 7-12 so that you have 2 sets of dice. Now change the colour of the dice from sprite numbers 7-12 to grey (colour 9). Note that in design a dice you only have to draw one face - i.e. if square with the appropriate number of dots on it (the dice look best if they are black - colour 14). Once you have done this, save the sprite bank, type in the program, load the sprite bank into the program and you're ready to play!

HIRESLOW

This simply converts high resolution Degas format pictures into low resolution Degas format pictures. Type it in, run it, select a picture to convert using the filebrowser, wait for it to convert it (you will see it build up the picture on the screen as it is converting it) and the converted picture will be stored in bank 0. Easy!

CREATIVE DUNGEONEERING

CD is a new and original concept conceived by Peter Guldback. With this package you can link up two STs via MODEM and play a sort of interactive

adventure game. On the disk supplied you get two programs, one called the MASTER program and the other called the MAINTEN program. What happens is one player is at one ST using the MASTER program and the other is using the MAINTEN program on the connected ST. It is necessary that either player cannot see the others screen. The player using the MASTER program will be trying to things just like a normal adventure game, but there is a major difference in the way these commands are handled. Instead of his commands being interpreted by the computer, which in turn prints the appropriate responses, the commands are dealt with by the other person on the adjoining ST. The other player is sort of Dungeon Master! He then send back the relevant message using the MAINTEN program which consists mainly of verbs to click on.

Before serious gameplay can start, an adventure world will have to be created - this is done with a very easy to use design program and you can design a relatively large world complete with objects etc. in a matter of hours (obviously providing that you have roughly worked out the locations, objects and puzzles etc. previously). If you want you could use the pre-designed world which is on the disk.

CD is so incredibly flexible and this is where it's strength lies. The player can do virtually what he likes and he doesn't have to stick to the old "GET KEY", "OPEN DOOR" type of commands. The player could type "OPEN THE DOOR WITH THE KEY THAT IS ON THE TABLE" and the other person would know exactly what he meant. The flexibility is in the MASTER program. Say, for example, that the player is next to a tree, and a location for up the tree (hasn't been previously designed). If the player typed "CLIMB THE TREE" the other player would quickly design a new location (using the MAINTEN program) with the text "You are high up in a sturdy oak tree" or something similar, and then move the player to that

```

1:OPEN #1:PRINT #1,"DICE"
2:CLOSE #1
3:OPEN #2:PRINT #2,"No More Naughtons"
4:CLOSE #2
5:OPEN #3:PRINT #3,"Version 1.000"
6:CLOSE #3
7:PRINT "You are going to play a game called DICE. You will be playing a game called DICE."
8:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
9:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
10:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
11:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
12:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
13:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
14:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
15:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
16:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
17:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
18:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
19:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
20:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
21:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
22:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
23:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
24:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
25:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
26:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
27:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
28:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
29:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
30:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
31:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
32:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
33:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
34:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
35:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
36:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
37:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
38:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
39:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
40:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
41:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
42:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
43:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
44:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
45:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
46:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
47:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
48:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
49:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
50:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
51:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
52:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
53:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
54:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
55:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
56:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
57:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
58:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
59:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
60:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
61:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
62:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
63:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
64:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
65:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
66:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
67:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
68:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
69:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
70:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
71:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
72:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
73:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
74:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
75:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
76:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
77:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
78:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
79:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
80:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
81:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
82:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
83:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
84:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
85:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
86:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
87:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
88:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
89:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
90:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
91:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
92:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
93:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
94:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
95:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
96:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
97:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
98:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
99:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."
100:PRINT "You will be playing a game called DICE. You will be playing a game called DICE."

```

location. As another example, let's say that the player is surrounded by mad aliens from the planet Mars. The player, not being armed, could try something original like "BEAN ME UP" and the other person, if he was of a kind heart, could quickly design the bridge of a certain well known vessel and save the player there, out of harm's way. He could then return the player to the main game action by printing a message like "Not being able to put up with your silly song for much longer, the captain drops you off at a nearby shopping centre" or something similar.

To help you with world designing the author has also put an easy to use map designer program on the disk. It's thought of something. Another feature of CD is that you can also have DTP/DTP/Master sampled sound effects during a game! You could have a phone ring, an explosion, a crashy door or anything. There is a large bank of RFX supplied on the disk to get you started and the authors plan to release further disks of heavily sampled sound effects for use with CD.

All in all, CD is an amazing package with enormous potential. Not only that, but it is immensely enjoyable as well! All you need is access to a PC's and a pair of MIDI leads to get started. MIDI leads are only about £6 a pair and you could link up with a friends PC.

CD is obviously a 2 player program but the more people there are, the better! If you have a local ST user group or club that you can go to, then CD would surely be very popular! It is a lot more fun if there are several people offering suggestions, and helping both the player and the 'master'. It really is a variable game! I would thoroughly recommend CD to anyone who has the slightest interest in adventure or role playing games. CD should be available from all major MD libraries by the time you read this.

Program 1

DICE!

by Ross Mc Naughton

Program 2 *overleaf*

STOS 3D

At last it's been released! The most awaited program since the STOS Compiler! Anyway, enough hype - let's get down to business. STOS 3D comes with 2 disks, a manual and a quick reference card. One of the disks contains the installation program and also a variety of 3D objects, while the other disk contains the heart of STOS-3D, the Object Modeller for GM for short. Using OM you can create 3D objects for use in STOS.

OM is surprisingly easy to use, and is also quite fast - you don't have to wait around for objects to be displayed etc. Using a wealth of options, you can create almost any object using the 8 basic blocks provided. There are 3 file 'blocks' and 3 3D blocks that can be used. The flat blocks would come in handy for things like wings on a plane. The 2 3D blocks are a cube and a pyramid and using these you can construct objects again. There are options to stretch and generally change the shape of any of the 5 preset blocks, then allowing you to get the shape you want. You can join blocks to other blocks to form an complex an object as you like. There is also another good option which allows you to add surface detail to your objects. Using this you could put windows or logos on objects and add damage to them if they have been hit etc. With OM you can even add transparent windows to objects so that we can see objects within other objects! There are so many options it would be impossible to list them all here but I think you get the general idea that OM is easy to use, flexible and doesn't take hours to do things.

TACKLING IT ON

Now the other part - the STOS extension. STOS-3D starts off on a hard disk where you realise that the 3D extension must take up STX and that it's a program you also have to reserve something from BANK 30000 for the objects. All this gives the amount of K your program itself uses would make using STOS 3D a tight squeeze for 1.5 meg users. If all other extensions are removed and STOS is AUTO loaded, then it may just be OK. The 3D extension adds 27 commands and 33 functions to BASIC. Using these you can display the 3D objects and manipulate them to your heart's content. You can move and animate the objects quite easily. The speed of the 3D is very fast but not as fast as commercial 3D games, as the package claims. STOS 3D is fast

enough to create enjoyable games but don't expect to have a load of objects moving about on the screen at lightning speed. One of the best parts of the package is the manual. The 164 page manual isn't excellently presented and is very well written which enables you to get to grips with things straight away. It takes you through things step by step which is definitely needed for something as complex as 3D.

PROBLEMS

Now all this is fine but there are a few things that let down the whole package. One of the major problems is the fact that every time you run your program, you have to load in your objects. It is bad enough if you have one object in your program, as this will take anything from 3-6 seconds to load, but if you have any more then it would mean a lengthy wait each time you alter a little bit of your program. Why they couldn't design 3D objects to load in and stay loaded in, like options, menus, screens, sampled sound etc., is beyond me. The only way round it that I can see is if you use the STOS run disk that came with the STOS Compiler and load all your objects into that before you load STOS. However this is still a bit of a hassle and is only really viable for 1 meg users. Of course, if you own a hard disk drive then this problem is greatly reduced, but then again how many people own a hard disk drive? If you are going to create a full game with STOS 3D then you will need enormous patience.

The next biggest problem I came across is that there is no easy way to have a floor, or ground, in STOS 3D. If you are doing a flight simulation for example, then a ground would be essential - but there is no facility for such a thing using the STOS-3D commands. You would

have to create a moving ground with a horizon etc. yourself. The last thing that I find a bit odd, although not really a major problem, is that you are limited to using 28 object numbers in a program.

When you are wondering around a huge 3D world, you expect to see more than just 30 objects. You can actually kill off an object if it is not visible, to free up its object number for another object, but this would all get a bit complex when trying to write a game.

STOS 3D should be in the shops as you read this and can be purchased for the considerable sum of £25. All in all I would recommend 1 meg users or hard disk drive owners to get this straight away - it is an the whole an excellent package. However, for 1.5 meg users I can see a lot of major difficulties that would be involved in writing anything worthwhile. If you just want to have a tinkler about with 3D and have the money to spare - great, go and get it. But if you are planning to write a full blown game in 3D, I think it would be right on impossible unless you have incredible patience.

So, we come to the end of another column. If you want me to send any critical eye over a stunning new package that you have written - send it in the revised formletter, if you want anything returned to you, please include an S.A.E. I'm always prepared to answer STOS questions and the like, so if you have any problems - write in with an S.A.E. As usual, I can be found at the following address. See for next!

**Dion Guy
STOS Column
11 Shore Crescent
Bishop's Cleeve
Hants
SO8 1DE**

```

1: END *** END ***
2: END *** END ***
3: END *** END ***
4: END *** END ***
5: END *** END ***
6: END *** END ***
7: END *** END ***
8: END *** END ***
9: END *** END ***
10: END *** END ***
11: END *** END ***
12: END *** END ***
13: END *** END ***
14: END *** END ***
15: END *** END ***
16: END *** END ***
17: END *** END ***
18: END *** END ***
19: END *** END ***
20: END *** END ***
21: END *** END ***
22: END *** END ***
23: END *** END ***
24: END *** END ***
25: END *** END ***
26: END *** END ***
27: END *** END ***
28: END *** END ***
29: END *** END ***
30: END *** END ***
31: END *** END ***
32: END *** END ***
33: END *** END ***
34: END *** END ***
35: END *** END ***
36: END *** END ***
37: END *** END ***
38: END *** END ***
39: END *** END ***
40: END *** END ***
41: END *** END ***
42: END *** END ***
43: END *** END ***
44: END *** END ***
45: END *** END ***
46: END *** END ***
47: END *** END ***
48: END *** END ***
49: END *** END ***
50: END *** END ***
51: END *** END ***
52: END *** END ***
53: END *** END ***
54: END *** END ***
55: END *** END ***
56: END *** END ***
57: END *** END ***
58: END *** END ***
59: END *** END ***
60: END *** END ***
61: END *** END ***
62: END *** END ***
63: END *** END ***
64: END *** END ***
65: END *** END ***
66: END *** END ***
67: END *** END ***
68: END *** END ***
69: END *** END ***
70: END *** END ***
71: END *** END ***
72: END *** END ***
73: END *** END ***
74: END *** END ***
75: END *** END ***
76: END *** END ***
77: END *** END ***
78: END *** END ***
79: END *** END ***
80: END *** END ***
81: END *** END ***
82: END *** END ***
83: END *** END ***
84: END *** END ***
85: END *** END ***
86: END *** END ***
87: END *** END ***
88: END *** END ***
89: END *** END ***
90: END *** END ***
91: END *** END ***
92: END *** END ***
93: END *** END ***
94: END *** END ***
95: END *** END ***
96: END *** END ***
97: END *** END ***
98: END *** END ***
99: END *** END ***
100: END *** END ***

```

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 56

£1.95

June/July

XL/XE

**LYNX
GAMES**
reviewed

NEW SOFTWARE

ATARILAB ...

CHROMACAD ...

PONDERING ABOUT MAX'S

**BARGAIN SOFTWARE
FOR YOUR XL/XE
FROM JUST 99p!**

80 COLUMN TEXT

YES, IT IS POSSIBLE WITHOUT HARDWARE ADD-ONS

ST FILE

ALTERNATE WORLDS

**WHICH TO CHOOSE -
HEIMDALL OR SHADOWLANDS?**

PRO-24

**OLD BUT GOOD
SHOULD YOU STILL BUY IT?**

PD & PRINTERS



THE STOS COLUMN

*In which
Dion Guy
brings you the
latest news
together with
two great new
programs to
enhance your
STOS listings*

After last issue's sudden arrival of STOS 3.0 and Creative Programming, the STOS scene has again gone extremely quiet. Still, not too noisy - the STOS column is here to bring you some more lovely listings! First though, a little bit of news.

Since last issue's review of **CREATIVE PROGRAMMING** CD, it has undergone a major overhaul. Now, instead of using STOS basic routines for dealing with MIX data, CD uses the STOS MIX extensions. The result of this being that CD is now much faster in dealing with data, which allows it to cope with more complex tasks. Anyway, the point is that CD is now even better than it was and is an unbeatable piece of software. If you have access to a ST MIX setup, CD should be available from all major PC libraries by the time you read this.

READY TO TYPE?

Now onto the listings. There are two featured in this issue, **JOINER** and **FLASHY PROGRAM LISTINGS CREATOR (FPL)**. Both are written by that multi talented programmer, Brian Amara. Here is a description of what each one does.

JOINER

This program takes MIX-compiled screen files and places them one after the other into the same memory bank. The number of pictures you can store depends only on your ST's memory space. This program is incredibly useful as normally you could only store a maximum of 16-compiled screens in STOS at any one time (and then you wouldn't have room for sprites-etc.). Now you can have as many screens as you want (memory permitting) in one bank, thus freeing up the other banks for other things.

After typing in and running the program, use the fileselector to load two MIX screen files. Make sure you only load compacted screen MIX files, as any other type of MIX file will ruin the whole process and you will have to start again. After you have loaded two files in you can then choose whether to add another file or save what you have done so far. Press 1 to load another file or 0 to save the current bank of screens.

When done is selected, a fileselector will appear. Use this to save the screens under a filename with the 3 letter extension .JMF. Then the program will save two files - the compacted screens bank and an .ASC file with the same name as the screen bank file. If you now quit the JOINER program (press 0) and go to an unused program area, you can load in the .ASC file. The .ASC file is actually a basic program that the JOINER program has created. The .ASC file simply displays the packed screens and is an example of how to access any screen in the bank.

To load the .ASC file just treat it like a normal BASIC file. The .ASC file loads in one line at a time onto the screen, unlike a normal .BASIC file, but when it has finished loading you can list, run and edit it as a normal .BASIC file. If you run it the program will load in the compacted screens bank and display all your screens in order, while waiting for a keypress between each one. If you list the program, you will see how to display a screen from the bank. You can then use the display routine in your own programs.

FPL

Using this program you can make your STOS statements stand out by using colours, underlined or shaded text. This program will also let you have a list 0 in your programs. FPL looks for codes in your programs and converts them into

© 1998 by The McGraw-Hill Companies, Inc.

718-333-1100

effects. See the example program for a demonstration of how to use the codes. They are codes to turn the effects on and off. When the FPL program returns across a code in one of your programs it turns the appropriate effect on or off and then restores the code from your program. The codes are as follows :

B = Increase on
I = Increase off
S = Shade on
S = Shade off
U = Underline on
U = Underline off
L = Line 0

To see how FPL works do the following. First, type in the example program and save it. Next, type in the FPL program. After saving it is time for the heavy use, run the FPL program. Now load the example program into FPL using the lineeditor then use screen instructions for what keys to press etc. Finally, save the converted program and quit FPL. If you now load the converted program you will find that FPL has converted the codes and added the desired effects.

A few points about FPL. When you make a line into line 0, you have to make sure that the first thing on the line is a REM statement or else it will not work. If you have a line 0 in your programs, you will find it cannot be edited - only listed. The shade, inverse and underline effects are not just limited to REM statements - as seen in the example program. Also, you are not confined to using just one effect per line, you can mix them if you like (as seen in the example program).

You will find that FPL is a quick and easy way to add special effects to your listings. I have found that it is a good way to highlight different sections of your programs. When you are looking through a listing the effects really jump out at you - thus making things easy to spot.

ADIOS

So that's it for another issue - space is tight! I can be located at the following address. If anyone has anything they want reviewing, or have a listing they would like published - you know where I am! Don't forget, for a guaranteed reply write me B.A.E. Until next time - 1997

Write to
Dion Guy
11 Shore Crescent
Bishopc Waltham
Hants
RG23 1DE

```

1 REM ***** ADIOS *****
2 REM ***** ADIOS *****
3 REM ***** ADIOS *****
4 REM ***** ADIOS *****
5 REM ***** ADIOS *****
6 REM ***** ADIOS *****
7 REM ***** ADIOS *****
8 REM ***** ADIOS *****
9 REM ***** ADIOS *****
10 REM ***** ADIOS *****
11 REM ***** ADIOS *****
12 REM ***** ADIOS *****
13 REM ***** ADIOS *****
14 REM ***** ADIOS *****
15 REM ***** ADIOS *****
16 REM ***** ADIOS *****
17 REM ***** ADIOS *****
18 REM ***** ADIOS *****
19 REM ***** ADIOS *****
20 REM ***** ADIOS *****
21 REM ***** ADIOS *****
22 REM ***** ADIOS *****
23 REM ***** ADIOS *****
24 REM ***** ADIOS *****
25 REM ***** ADIOS *****
26 REM ***** ADIOS *****
27 REM ***** ADIOS *****
28 REM ***** ADIOS *****
29 REM ***** ADIOS *****
30 REM ***** ADIOS *****
31 REM ***** ADIOS *****
32 REM ***** ADIOS *****
33 REM ***** ADIOS *****
34 REM ***** ADIOS *****
35 REM ***** ADIOS *****
36 REM ***** ADIOS *****
37 REM ***** ADIOS *****
38 REM ***** ADIOS *****
39 REM ***** ADIOS *****
40 REM ***** ADIOS *****
41 REM ***** ADIOS *****
42 REM ***** ADIOS *****
43 REM ***** ADIOS *****
44 REM ***** ADIOS *****
45 REM ***** ADIOS *****
46 REM ***** ADIOS *****
47 REM ***** ADIOS *****
48 REM ***** ADIOS *****
49 REM ***** ADIOS *****
50 REM ***** ADIOS *****
51 REM ***** ADIOS *****
52 REM ***** ADIOS *****
53 REM ***** ADIOS *****
54 REM ***** ADIOS *****
55 REM ***** ADIOS *****
56 REM ***** ADIOS *****
57 REM ***** ADIOS *****
58 REM ***** ADIOS *****
59 REM ***** ADIOS *****
60 REM ***** ADIOS *****
61 REM ***** ADIOS *****
62 REM ***** ADIOS *****
63 REM ***** ADIOS *****
64 REM ***** ADIOS *****
65 REM ***** ADIOS *****
66 REM ***** ADIOS *****
67 REM ***** ADIOS *****
68 REM ***** ADIOS *****
69 REM ***** ADIOS *****
70 REM ***** ADIOS *****
71 REM ***** ADIOS *****
72 REM ***** ADIOS *****
73 REM ***** ADIOS *****
74 REM ***** ADIOS *****
75 REM ***** ADIOS *****
76 REM ***** ADIOS *****
77 REM ***** ADIOS *****
78 REM ***** ADIOS *****
79 REM ***** ADIOS *****
80 REM ***** ADIOS *****
81 REM ***** ADIOS *****
82 REM ***** ADIOS *****
83 REM ***** ADIOS *****
84 REM ***** ADIOS *****
85 REM ***** ADIOS *****
86 REM ***** ADIOS *****
87 REM ***** ADIOS *****
88 REM ***** ADIOS *****
89 REM ***** ADIOS *****
90 REM ***** ADIOS *****
91 REM ***** ADIOS *****
92 REM ***** ADIOS *****
93 REM ***** ADIOS *****
94 REM ***** ADIOS *****
95 REM ***** ADIOS *****
96 REM ***** ADIOS *****
97 REM ***** ADIOS *****
98 REM ***** ADIOS *****
99 REM ***** ADIOS *****
100 REM ***** ADIOS *****

```

Above - The Flashy Programs Listing Creator
Below - a simple example to show the utility in use

```

1 REM ***** ADIOS *****
2 REM ***** ADIOS *****
3 REM ***** ADIOS *****
4 REM ***** ADIOS *****
5 REM ***** ADIOS *****
6 REM ***** ADIOS *****
7 REM ***** ADIOS *****
8 REM ***** ADIOS *****
9 REM ***** ADIOS *****
10 REM ***** ADIOS *****
11 REM ***** ADIOS *****
12 REM ***** ADIOS *****
13 REM ***** ADIOS *****
14 REM ***** ADIOS *****
15 REM ***** ADIOS *****
16 REM ***** ADIOS *****
17 REM ***** ADIOS *****
18 REM ***** ADIOS *****
19 REM ***** ADIOS *****
20 REM ***** ADIOS *****
21 REM ***** ADIOS *****
22 REM ***** ADIOS *****
23 REM ***** ADIOS *****
24 REM ***** ADIOS *****
25 REM ***** ADIOS *****
26 REM ***** ADIOS *****
27 REM ***** ADIOS *****
28 REM ***** ADIOS *****
29 REM ***** ADIOS *****
30 REM ***** ADIOS *****
31 REM ***** ADIOS *****
32 REM ***** ADIOS *****
33 REM ***** ADIOS *****
34 REM ***** ADIOS *****
35 REM ***** ADIOS *****
36 REM ***** ADIOS *****
37 REM ***** ADIOS *****
38 REM ***** ADIOS *****
39 REM ***** ADIOS *****
40 REM ***** ADIOS *****
41 REM ***** ADIOS *****
42 REM ***** ADIOS *****
43 REM ***** ADIOS *****
44 REM ***** ADIOS *****
45 REM ***** ADIOS *****
46 REM ***** ADIOS *****
47 REM ***** ADIOS *****
48 REM ***** ADIOS *****
49 REM ***** ADIOS *****
50 REM ***** ADIOS *****
51 REM ***** ADIOS *****
52 REM ***** ADIOS *****
53 REM ***** ADIOS *****
54 REM ***** ADIOS *****
55 REM ***** ADIOS *****
56 REM ***** ADIOS *****
57 REM ***** ADIOS *****
58 REM ***** ADIOS *****
59 REM ***** ADIOS *****
60 REM ***** ADIOS *****
61 REM ***** ADIOS *****
62 REM ***** ADIOS *****
63 REM ***** ADIOS *****
64 REM ***** ADIOS *****
65 REM ***** ADIOS *****
66 REM ***** ADIOS *****
67 REM ***** ADIOS *****
68 REM ***** ADIOS *****
69 REM ***** ADIOS *****
70 REM ***** ADIOS *****
71 REM ***** ADIOS *****
72 REM ***** ADIOS *****
73 REM ***** ADIOS *****
74 REM ***** ADIOS *****
75 REM ***** ADIOS *****
76 REM ***** ADIOS *****
77 REM ***** ADIOS *****
78 REM ***** ADIOS *****
79 REM ***** ADIOS *****
80 REM ***** ADIOS *****
81 REM ***** ADIOS *****
82 REM ***** ADIOS *****
83 REM ***** ADIOS *****
84 REM ***** ADIOS *****
85 REM ***** ADIOS *****
86 REM ***** ADIOS *****
87 REM ***** ADIOS *****
88 REM ***** ADIOS *****
89 REM ***** ADIOS *****
90 REM ***** ADIOS *****
91 REM ***** ADIOS *****
92 REM ***** ADIOS *****
93 REM ***** ADIOS *****
94 REM ***** ADIOS *****
95 REM ***** ADIOS *****
96 REM ***** ADIOS *****
97 REM ***** ADIOS *****
98 REM ***** ADIOS *****
99 REM ***** ADIOS *****
100 REM ***** ADIOS *****

```

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 57 £1.95
August/September

XL/XE

DOUBLE AGENTS

a new game 
from Bill Halsall

KESOFT

Run down on new
products from this
German supporter
of the XL/XE

**BARGAIN SOFTWARE
FOR YOUR XL/XE**
FROM JUST 99p!

BEGINNING IN ASSEMBLY LANGUAGE
Start of a new series!

ST FILE

EDUCATION

**SHOE PEOPLE
COUNT and ADD
MIX and MATCH**

BAND-IN-A-BOX revisited

**MORE
LYNX
GAMES**

In the Public Domain
USEFUL UTILITIES



THE STOS COLUMN



After the release of STOS 30, I thought that we would be treated to a fresh supply of STOS products - such as the long-awaited STOS Veli and STOS Muskrat. But what happened? The STOS server has gone totally quiet again. Something, I think, aha! - STOS Veli was mentioned in issue 4.1 of New Atari User, which came out on the 23rd of November 1989! STOS Muskrat is just as bad, having been mentioned in the following issue. STOS Veli was promised for Spring 1990 and STOS Muskrat was said to have been "locally rewritten since some of the release broke in November 1989" but still did not have "a positive release date" (quote from issue 4.4 of New Atari User). So for two and a half years we have been waiting for these wonder products without a peep from either Mandrake (sic) Eurocomp or Whalesoft. I have not been told anything about these two packages, and have not seen them mentioned any-

where since issue 4.6 of New Atari User (written on the 24th of January 1991). It's not as though STOS's popularity has faded either - have you seen the number of new PD gamers and utilities that are written in STOS? No, the onus is on the aforementioned computers - GET HOLD OF IT! TOGETHER AND STAY SUPPORTING STOS AGAIN!

THE LISTING!

On to this issue's main feature, the listing! As you can see, it is quite a big one this time - but I think you'll find it's well worth typing it in. The listing is a game called Enemy Fleet which is based on that old classic - Battleships. Of course, the really good thing about Enemy Fleet is that there are no massive memory limits to type in - it doesn't require any special!

ENEMY FLEET

The game is very simple to play. The aim is to destroy your opponent's (in this case, the computer) fleet of battleships by dropping bombs onto where you think they are. Your opponent will likewise try to do the same to you. You each start with 4 ships, and each ship is capable of launching 4 bombs. When you start the game you have to position your fleet where you want them, on a grid representing an ocean. Each ship is represented by 4 coloured squares. The first ship will appear in the centre of the 24x14 grid and can be moved around by using the cursor keys. Press space to confirm where you want the ship to be and the next one will then appear. Repeat this process until you have placed all 4 ships and then you are ready to play. Once you have placed your ships the screen will switch to the bombing screen. Here you can use the mouse to

choose where you want the bombs to go (on the grid). To choose a square simply point at it and press the left mouse button. The bomb is represented by a small white circle inside the square. Don't worry about bombing your own ships - this is not possible. On the right hand side of the screen is a panel - this is the status panel. This tells you what the condition of each of your ships is (which could be "OK", "Damaged" or "Sunk"). Once you have finished you start with 24 bombs (the screen will switch to the detonation screen, where you can see if your bombs have found a ship or not. If a bomb does find a ship, the part of the ship it has hit will be revealed (each ship takes 4 bombs to be destroyed. If it does not, the bomb will turn grey to indicate it is a miss (and also to stop you dropping a bomb on the same square twice). For each ship destroyed you lose the use of 4 bombs per turn. After you have lost your turn the computer will try to destroy your fleet by using the same methods. The game continues until one side destroys all 4 of the opponent's ships. And there you have it!

ADIEU

Now look, before I go this time I'm not going to start begging for you to send in material to publish. Well, maybe just a bit - please, please, please send in some stuff! If you've written a program that you want reviewing, or a listing you want to share with the world - send it in! Send me STOS-related let's or bates you may have lying around to the following address. See you next time!

Dion Guy,
STOS COLUMN
11 Shore Crescent
Bishops Waltham
Hants
SO5 1QZ

**All is quiet on
the STOS
front but
Dion Guy
brings you a
neat little
type-in listing**

```

10 rem SCREEN = VARIABLE SETUP
20 dim SCREEN(25,25,GETTY)
30 mode 0 : key off : hide on : clear all
40 palette 88,8777,80,80,8999,8418,8448,8444,8333,8555,8000,870,87,8778,833,8787
50 window 1,8,8,80,13,8,1 : cofs all
60 home : pos 18 : center "ENTER FLEET" : pos 3
70 locate 8,2 : center "By Your Joy"
80 locate 8,8 : center "For the STOS Column"
90 locate 8,8 : center "Press any key to start"
100 def scroll 1,0,0 to 128,128,0,1 : def scroll 2,0,0 to 128,128,0,-1 : clear
110
120 for A=0 to 80 : wait vbl : scroll 1
130 if intkey#0 then goto 180
140 next A
150 for A=0 to 80 : wait vbl : scroll 2
160 if intkey#0 then goto 180
170 next A
180 goto 110
190 cls
200 for A=0 to 34
210 draw 0,A*8 to 182,A*8 : draw A*8,8 to A*8,182
220 next A
230 show 128,8 to 112,182
240 C=0 : for A=0 to 148 step 34 : ink 10+C : bar 334,A to 290,A+18 : ink C :
250 A : restore as screen 8 : screen copy physio to 8
260 locate 29,1 : print "Position" : locate 28,3 : print "your fleet"
270 restore as screen 5 : screen copy physio to 5
280 home
290 rem POSITIONING TIME FLEET
300 X=1 : Y=1 : if REM=3 then goto 440
310 repeat
320 REM=intkey# : REM=asc(key#)
330 if REM=75 and X=0 then dec X
340 if REM=77 and X=13 then inc X
350 if REM=72 and Y=0 then dec Y
360 if REM=80 and Y=13 then inc Y
370 if REM=82 or Y=13 then goto 410
380 if REM#81321 then goto 380
390 until true#false
400 if GRID(X,Y)<0 or GRID(X+1,Y)<0 or GRID(X,Y)>148 or GRID(X+1,Y)>148 then
410 bell : goto 370
420 GRID(X,Y)=REM : GRID(X+1,Y)=REM : GRID(X,Y)=REM : GRID(X+1,Y)=REM
430 locate 31,4+8*REM/20 : print "Done" : screen copy physio to 5 : inc REM :
440 wait 10 : cls# : REM=0 : goto 380
450 screen copy 5 to physio,0,0 : screen copy 5 to back : ink 9+REM : bar
460 REM,7*8 to REM+18,9*8+18
470 REM=X : Y=Y
480 goto 370
490 rem COMPUTER'S POSITIONING OF FLEET
500 for A=1 to 4
510 REM=123 : REM=123
520 if GRID(X,0)=0 and GRID(X+1,0)=0 and GRID(X,Y)=0 and GRID(X+1,Y)=0 then
530 GRID(X,Y)=REM : GRID(X+1,Y)=REM : GRID(X,Y)=REM : GRID(X+1,Y)=REM also goto
540
550 next A
560 goto 580
570 rem PLACE YOUR BOMBS
580 REM=34+755*8
590 fade 18 : wait 75 : cls
600 change mouse 2 : limit mouse 0,0 to 191,191
610 screen copy 0+SET to physio : screen copy 0+SET to back : REM=0 : gosub 1020
620 fade 18 to 8 : wait 75
630 show on
640 locate 28,1 : print "Place your" : DF=1 : gosub 410
650 ink 1 : for A=1 to 88
660 repeat : key mouse# : key mouse# : until mouse key#
670 if point(X*8+8,Y*8+8)=0 then rase REM,8 to REM+8,Y*8+8 : dec REM : goto 610
680 goto 580
690 REM=18+18*REM : REM=REM-chr#121
700 if intkey#1 then REM="0"+REM
710 locate 28,3 : print "bombs (" +REM+ ")" : if DF=1 then DF=0 : return
720 next A

```

continued

```

858 fade on : fade 10 : wait 75
859 ink 0 : bar 124.8 to 104.12 : locate 28.1 : print "Bombs away"
860 fade 10 to 8 : wait 75
861 rem 10 THERE IS SET ON ENEMY FLIGHT
862 for A=0 to 23 : for A=0 to 23
863 if point(A*8+4,B*8+4)=0 then ink 10 : bar A*8,B*8 to A*8+8,B*8+8 : ink 8 :
  rbar A*8,B*8 to A*8+8,B*8+8 : goto 718 else goto 720
864 if GRID(A,B)=0 then ink 8+GRID(A,B)+3 : bar A*8,B*8 to A*8+8,B*8+8 : boom :
  locate 31.3 : print "HIT!" : inc ETCHER(A,B) : wait 35 : if ETCHER(A,B)=4
  then inc EGG : goto 728 else goto 730
865 bell : locate 31.3 : print "MIZ!" : wait 75 : ink 1 : bar A*8,B*8 to
  A*8+8,B*8+8
866 locate 31.3 : print space$10 : next A : next B : if EGG=0 then goto 1070
867 if EGG=0 then reserve as screen 1 : SET=1
868 locate 28.1 : print space$101 : screen copy physio to 1
869 fade 10 : wait 25
870 c1a : screen copy 5+SET2 to physio : screen copy 4+SET2 to bart : ink 0 :
  bar 228.8 to 164.12 : locate 28.1 : print "Computer's" : locate 31.3 : print
  "Turn" : EGG=4 : goto 880
871 fade 10 to 8 : wait 25
872 rem COMPUTER'S TURN TO PLACE BOMBS
873 CMM=20-EGG*41 : for A=0 to 23 : for A=0 to 23 : P=point(A*8+4,B*8+4) : if
  P=0 then goto 888
874 if P=10 then if SETP=50=0 then goto 888
875 for B=0-1 to B=3 : for C=0-1 to A=1
876 if C=0 or D=0 or C=D or C=D then goto 878
877 if point(C*8+4,D*8+4)=0 then ink 1 : rbar C*8,D*8 to C*8+8,D*8+8 : dec CMM :
  wait 35 : if CMM=0 then goto 920
878 next C : next D
879 next A : next B
880 for A=1 to CMM
881 word(23) : word(23)
882 if point(C*8+4,D*8+4)=0 then ink 1 : rbar C*8,D*8 to C*8+8,D*8+8 else goto
  888
883 wait 35 : next A
884 rem HAS COMPUTER SET YOUR FLIGHT?
885 fade 10 : wait 35 : ink 0 : bar 124.8 to 104.12 : locate 28.1 : print "Bombs
  away" : fade 10 to 8 : wait 75
886 for A=0 to 23 : for A=0 to 23
887 if point(A*8+4,B*8+4)=0 then ink 10 : bar A*8,B*8 to A*8+8,B*8+8 : ink 8 :
  rbar A*8,B*8 to A*8+8,B*8+8 : goto 728 else goto 970
888 if GRID(A,B)=0 and GRID(A,B)=1 then ink 8+GRID(A,B) : bar A*8,B*8 to
  A*8+8,B*8+8 : boom : locate 31.3 : print "HIT!" : inc ETCHER(A,B) : wait 35 :
  if ETCHER(A,B)=4 then inc TEG : goto 978 else goto 970
889 bell : locate 31.3 : print "MIZ!" : wait 35 : ink 1 : bar A*8,B*8 to
  A*8+8,B*8+8
890 locate 31.3 : print space$10 : next A : next B : if TEG=4 then goto 1070
891 if EGG=0 then EGG=2 : reserve as screen 8
892 screen copy physio to 8
1000 goto 100
1001 and
1002 rem STATUS DISPLAY
1003 for A=7 to 12 step 3 : locate 31.3
1004 if STILL(A-4/3)=EGG=0 then print "0.0"space$10
1005 if STILL(A-4/3)=EGG>0 and STILL(A-4/3)=EGG=4 then print "Damaged"
1006 if STILL(A-4/3)=EGG=4 then print "Sink"space$10
1007 next A
1008 return
1009 rem END GAME ROUTINE
1100 if EGG=0 then W="PLAYER 1" else W="COMPUTER"
1101 fade on : fade 10 : wait 75 : c1a : fade 10 to 8
1102 windowes 1,0,0,48,12,8,0 : scroll off : cars off
1103 def scroll 1,0,76 to 120,120,-10,0
1104 home : center W="has destroyed"
1105 locate 9.2 : center "The enemy fleet!"
1106 locate 9.11 : center "Press any key to restart!"
1107 pen 8 : locate 8.8 : center "Well Done!" : locate 9.1 : center "Game's Over"
1108 clear key : repeat : wait vbl : scroll 1 : screen copy physio,8,98,16,128
  to physio,328,76 : end$1 key$1
1109 for A=0 to 23 : for B=0 to 23 : GRID(A,B)=0 : next B : next A : for A=0 to
  23 : STILL(A)=0 : next A
1110 TEG=0 : EGG=0 : SET=0 : SET2=0 : for A=0 to 8 : screen A : next A : goto 180

```

NEW

PAGE 6 PUBLISHING'S

ATARI

USER

Issue 58 £1.95

October/November

XL/XE

FOOTBALL CRAZY!

A round-up of ALL the football games for the classic Atari

**BARGAIN SOFTWARE
FOR YOUR XL/XE
FROM JUST 99p!**



Type in frustration
that could damage
your brain!

ST FILE

CELEBRATING MANSELL'S CHAMPIONSHIP!
A round-up of the best racing games

FORMULA ONE GRAND PRIX

Can Microprose help you become the next Nigel Mansell?

LATEST LYNX GAMES

**SOME CRACKING
GAMES IN THE
PUBLIC DOMAIN**

INCLUDING OUR REGULAR
MUSIC AND STOS COLUMNS



THE STOS COLUMN



Welcome to another exciting STOS column! This issue, not only are there two really listings for you to type in but there is also a great offer in the values advantage of The two programs featured in this issue are **WORDSEARCH**, a wordsearch game, and **DOCVIEW**, a document viewer (as you can see, I spent ages working out titles for those programs). More about the two programs in a moment, but first - the offer!

LISTINGS DISK

Are you the sort of person who likes typing in long listings? If so, you now have the chance to relieve your aching fingers. For just £2.95 you can obtain a disk containing the past 4 issues STOS column listings (including this issue). These include handy utilities like **COMPILE CONFIGURER** and **ASMER**, and enjoyable games such as **DICE** and **ENEMY FLEET**. All in all you will get 9 programs, which works out at a cost of around 33 pence each! To get your mitts on this wonderful disk just send a che-

que/postal order for £2.95 (cheque payable to D. GUY) to the exact address found at the end of this column) and clearly afterwards a conspicuously disk-shaped jiffy bag will be stuffed through your letter box!

WORDSEARCH

Now onto the listings. First up is a pretty nifty wordsearch game known if I do say so myself. After typing it in and running it you will be face in face with the main screen. At the top of the screen are two options, "ENTER WORDS" and "PLAY WORDSEARCH". Firstly, use the mouse to click on "ENTER WORDS". The screen will now change to show the numbers 1 to 26 going down the screen and the word "TITLE" at the top of the screen. You can now type in up to 26 words (max. 10 letters each) that you want to be put in your wordsearch, and you can also give your wordsearch a title (up to 26 letters long). After you have typed each word press RETURN to go onto the next one. You can use the ESCAPE key if you make a mistake and you can also use the UP/DOWN cursor keys to move up and down the list of words. Once you have finished either press RETURN while on the 26th word or press the ESCAPE key (you can press ESCAPE at any time). If you want to clear all the words to start again press the GUY HOME key. After you have typed in the words and you are back on the main screen click on "PLAY WORDSEARCH" to start playing. The computer will take a few moments to create the wordsearch in memory and then you will see the wordsearch appear in the left hand side window and the list of words to find in the right hand side window. Once you think you have found a word, use the mouse to click on it's first letter (e.g., if the word was "COMPUTER", you would click on the 'C') and then use the keypad keys to highlight the rest of the word. In this

game the keypad keys act as direction keys, with 0 being North-east, 1 being South-west, 8 being East, etc. etc. After you have clicked on the first letter of a word press the appropriate keypad key to go in the direction that the word is going. Keep pressing the key until the whole word is highlighted. Then, press the ENTER key and, if the word is correct, the computer will remove the word from the list and you can go on to find the next word. Once you have found all the words, the computer will display how long it took you. You can then create another wordsearch and try to better your time!

DOCVIEW

The second program this issue is a very handy document viewer. Normally you can't view documents from within STOS but with this program you can load a whole document into memory and scroll up and down it with ease. Upon running, simply use the standard STOS Blocker to choose a document file to view and, after the document has loaded, use the UP/DOWN arrow keys to scroll through it.

UNTIL NEXT TIME

And so, we reach the end of another STOS column. Remember, if you have any STOS related stuff to contribute to the column, just send it to the following address. Bye!

Dion Guy
11 Shore Crescent
Bishops Cleeve
Hants
RG32 1JZ

Dion Guy
presents two
new type-in
listings and
offers a ready
to run disk

```

10 rem WORDS = VARIABLE SIZE
20 dim WORD(100,10000)integer
30 mode 1 : key off
40 set page 1,0,0 to 255,10 : set page 2,100,0 to 255,10
50 wordsize 1,0,0,0,0,0,0 : word(1) = wordsize 0,0,0,0,0,0,0 : word(1) =
60 wordsize 0 : word off : word(1) : print "ENTER WORDS" : locate 1,10 :
70 rem "FILE INFORMATION" : key 1 : key 255,0 to 255,10 : word 0,0 to 255,10 :
80 word
90 word(1) = word(1) : wordsize 100
100 if key and key then word : word 100
110 word(1) = word : word 100
120 word(1) = word : word 100 : if word(1) = 1 then word 100
130 word 0
140 if word(1) then word : word 100 : word 0,0 to 255,10 : word : word(1) =
150 word(1) : word 100 : word 0 : word 0,0 to 255,10 : word 100
160 word 0 : word 0,0 to 255,10 : word 1 : wordsize 0 : word off : word : word(1) =
170 word(1)
180 rem WORDS IN WORDS
190 for i=1 to 100
200 if word(1) = 1 then word 100
210 if word(1) = 1 then word 100
220 if word(1) = 1 then word 100
230 if word(1) = 1 then word 100
240 if word(1) = 1 then word 100
250 if word(1) = 1 then word 100
260 if word(1) = 1 then word 100
270 if word(1) = 1 then word 100
280 if word(1) = 1 then word 100
290 if word(1) = 1 then word 100
300 if word(1) = 1 then word 100
310 if word(1) = 1 then word 100
320 if word(1) = 1 then word 100
330 if word(1) = 1 then word 100
340 if word(1) = 1 then word 100
350 if word(1) = 1 then word 100
360 if word(1) = 1 then word 100
370 if word(1) = 1 then word 100
380 if word(1) = 1 then word 100
390 if word(1) = 1 then word 100
400 if word(1) = 1 then word 100
410 if word(1) = 1 then word 100
420 if word(1) = 1 then word 100
430 if word(1) = 1 then word 100
440 if word(1) = 1 then word 100
450 if word(1) = 1 then word 100
460 if word(1) = 1 then word 100
470 if word(1) = 1 then word 100
480 if word(1) = 1 then word 100
490 if word(1) = 1 then word 100
500 if word(1) = 1 then word 100
510 if word(1) = 1 then word 100
520 if word(1) = 1 then word 100
530 if word(1) = 1 then word 100
540 if word(1) = 1 then word 100
550 if word(1) = 1 then word 100
560 if word(1) = 1 then word 100
570 if word(1) = 1 then word 100
580 if word(1) = 1 then word 100
590 if word(1) = 1 then word 100
600 if word(1) = 1 then word 100
610 if word(1) = 1 then word 100
620 if word(1) = 1 then word 100
630 if word(1) = 1 then word 100
640 if word(1) = 1 then word 100
650 if word(1) = 1 then word 100
660 if word(1) = 1 then word 100
670 if word(1) = 1 then word 100
680 if word(1) = 1 then word 100
690 if word(1) = 1 then word 100
700 if word(1) = 1 then word 100
710 if word(1) = 1 then word 100
720 if word(1) = 1 then word 100
730 if word(1) = 1 then word 100
740 if word(1) = 1 then word 100
750 if word(1) = 1 then word 100
760 if word(1) = 1 then word 100
770 if word(1) = 1 then word 100
780 if word(1) = 1 then word 100
790 if word(1) = 1 then word 100
800 if word(1) = 1 then word 100
810 if word(1) = 1 then word 100
820 if word(1) = 1 then word 100
830 if word(1) = 1 then word 100
840 if word(1) = 1 then word 100
850 if word(1) = 1 then word 100
860 if word(1) = 1 then word 100
870 if word(1) = 1 then word 100
880 if word(1) = 1 then word 100
890 if word(1) = 1 then word 100
900 if word(1) = 1 then word 100
910 if word(1) = 1 then word 100
920 if word(1) = 1 then word 100
930 if word(1) = 1 then word 100
940 if word(1) = 1 then word 100
950 if word(1) = 1 then word 100
960 if word(1) = 1 then word 100
970 if word(1) = 1 then word 100
980 if word(1) = 1 then word 100
990 if word(1) = 1 then word 100
1000 if word(1) = 1 then word 100

```

Listing 1

W
O
R
D
S
E
A
R
C
H

continued

[illegible]

DOCUMENT DISPLAY

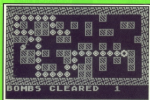
Page 6 Publishing's

NEW ATARI USER

The Resource for the ATARI CLASSIC and the ATARI ST

Issue 89 December/January

£2.50



SNAKEY

A neat little type-in game

FOR THE ATARI ST

A320 AIRBUS - *at last you can fly without fighting!*

THE BLITTER TRUTH - *is it worth fitting a blitter?*

ELVIRA 2 - *At last, but worth the wait?*

FOR THE ATARI CLASSIC

BRAND NEW SOFTWARE
reviewed!

BANK SWITCHING
- use that extra 130XE RAM

NUMBER SORTING routines
SCOTLAND'S DISK MAGS
reviewed

SUPERSCRIPT - *still available but still the best?*



THE STOS COLUMN

More STOS programs from Dion Guy

Greetings! Another STOS Column arrives, complete with two program listings for you to enter. This issue there is another type of game and also a program which demonstrates eight alternative ways to make screens appear. There is also a modification to last issue's Wordsearch program which allows you to print out a wordsearch.

WORDSEARCH UPDATE

Thanks to a suggestion from reader Ian Holden, I have now modified my Wordsearch program (featured in issue 26) so that it can print out a wordsearch along with the list of words to find. Just add the lines in programs 1 to the existing wordsearch listing. After you have run it, and entered the words to find into it, select the "Play Wordsearch" option. You will then be asked if you want to print out the wordsearch. (Press the left mouse button to print or the right button to type on.) Make sure your printer is loaded and on line. After the wordsearch has printed out, the program will continue as normal.

```

10: on error goto 1295
50: declare @ = home : print screen(240) : home = 44704 : print wordsearch-ask
100: home = right(home)
110: declare @ = home:home : print screen for @ and 10:110
120: if not error goto 1215
1210: on error goto 1295
1220: print screen(240)
1230: print @ : print
1240: for @ = 0 to 99 : print
1250: for @ = 0 to 99 : print @ and 10:110
1260: print @ and 10:110
1270: print @ and 10:110
1280: if not error goto 1295
1290: on error goto 1295
1295: print screen(240)
1300: print 99

```

Listing 1 - an update to last issue's Wordsearch

PICMIX

Yes - another complete type in game from the STOS Column! This time it is a very simple but enjoyable sliding puzzle type game. After typing it in and running it, select one of the load options to load either a Degas or Rembrandt picture. Then select "PLAY PICMIX" to get going. The program will segment the picture into 16 pieces and then remove the top right hand corner piece. It will then mix up the remaining 15 pieces and display the result on the screen. Your task is to rearrange the pieces and recreate the 'original' picture. You do this using the joystick. Simply use the Up, Down, Left and Right controls to slide the pieces around. Once you have restored the original picture you will be told how long you took and then returned to the menu. You can now either load another picture or reset with the same one and try and beat your time. If you can restore a picture in under 30 seconds then you will have perfected it! At any time during the game you wish to return to the menu, just press the "Q" key.

SCREEN APPEAR PROGRAM

This program shows you eight ways of making screens appear. It originated from a disk fixture called ST Programmer and I have since updated it. Once you have typed it in and run it you will see a menu. Firstly, press 55555 to load in a Degas screen. Then, using the menu, select which one of the eight appear routines you want to see. You will then see the screen you loaded in rather appear in a unusual way. After pressing a key, you will be returned to the menu where you can choose another appear routine to have a go at. You can use any of these appear routines in your programs. The routines are clearly marked with BASIC statements in the listing, so you can easily examine them (and copy them to your own programs). By the way, this program and all the appear routines work in all three resolutions.

THE END

As well, the end of another column is sign on. Don't forget, if you have any STOS type stuff you want looking over - you know where I am. Just remember to include an S.A.E. if you want a reply, please! Until the next column - farewell!

Dion Guy
11 Shore Crescent
Bishops Cleeve
Hants
SO5 1JG

[illegible]

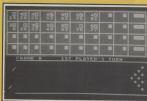
**A neat
sliding
square
puzzle for
your own
Degas
pictures**

NEW ATARI USER

The Resource for the ATARI CLASSIC and the ATARI ST

Issue 60 February/March

£2.50



TEN PIN BOWLING

A short but sweet type-in

FOR THE ATARI ST

RAILROAD TYCOON

A rave review and

YOU CAN WIN A COPY!

AIR WARRIOR

Can another flight sim be any different?

FOR THE ATARI CLASSIC

NEW SOFTWARE REVIEWED

HYPNOTIC LAND & ENIGMATIX!

DISKBASE - a *Public Domain* program that is as good as commercial databases

ATARI IN FRANCE

NUMCON - *All the useful conversions you might need*

LYNX - four new games reviewed



THE STOS COLUMN

Welcome to another STOS Column (the 23rd if you're keeping count), and as usual it is packed full of program news! This issue there is not one, not three, but two type in listings for you to convert. One of them is a utility and the other a game, which gives a nice balance to the column. It also means that there should be something for everyone. Both programs are written by a writer who lives somewhere down South, and who is absolutely no relation to myself. Anyway, onto the programs.

STOS DISK MANAGER

This program is a rather handy disk manager for you to use from within STOS. It has 8 functions which include converting MCO to PFI files, delete file, create folder and display free disk space. It is very easy to use. After typing S.D.M. move it to disk for future use (it is preferable to save it as an .JCL file so that you can reload it as a MCO extension). When using the program, use the up/down arrow keys and space to select an option and then follow the on screen instructions. You should find that using this necessary saves quite a lot of time when manipulating files.

SECRET CODE

This is based on an old 23-83 JCL and the history book's game called Secret Code (surprise, surprise). You all know how to play Mastermind, right? Good. Secret Code is very similar to Mastermind, but instead of guessing a four colour sequence you have to guess a four number sequence. If one of the numbers you enter is in the computer's four number sequence, but you enter it in the wrong place the computer will display a "?". If one of the numbers you enter is in the computer's four number sequence and you enter it in the right place the computer will display a "1". You have ten turns to guess the numbers. Go to it!

TA-TA

And so the war sets on another column. Don't forget, if you have any good (boring) programs lying around, send them off and send them in. I'll always be happy to receive any contributions to the column. Your program could find its way into these hallowed pages! You can contact me at the following address. Ta-Ta for now!

**Dion Guy,
STOS Column,
11 Shore Crescent,
Bishops Cleeve,
SOS 102**

```

1000 REM ***** STOS DISK MANAGER *****
1010 REM ***** STOS DISK MANAGER *****
1020 REM ***** STOS DISK MANAGER *****
1030 REM ***** STOS DISK MANAGER *****
1040 REM ***** STOS DISK MANAGER *****
1050 REM ***** STOS DISK MANAGER *****
1060 REM ***** STOS DISK MANAGER *****
1070 REM ***** STOS DISK MANAGER *****
1080 REM ***** STOS DISK MANAGER *****
1090 REM ***** STOS DISK MANAGER *****
1100 REM ***** STOS DISK MANAGER *****
1110 REM ***** STOS DISK MANAGER *****
1120 REM ***** STOS DISK MANAGER *****
1130 REM ***** STOS DISK MANAGER *****
1140 REM ***** STOS DISK MANAGER *****
1150 REM ***** STOS DISK MANAGER *****
1160 REM ***** STOS DISK MANAGER *****
1170 REM ***** STOS DISK MANAGER *****
1180 REM ***** STOS DISK MANAGER *****
1190 REM ***** STOS DISK MANAGER *****
1200 REM ***** STOS DISK MANAGER *****
1210 REM ***** STOS DISK MANAGER *****
1220 REM ***** STOS DISK MANAGER *****
1230 REM ***** STOS DISK MANAGER *****
1240 REM ***** STOS DISK MANAGER *****
1250 REM ***** STOS DISK MANAGER *****
1260 REM ***** STOS DISK MANAGER *****
1270 REM ***** STOS DISK MANAGER *****
1280 REM ***** STOS DISK MANAGER *****
1290 REM ***** STOS DISK MANAGER *****
1300 REM ***** STOS DISK MANAGER *****
1310 REM ***** STOS DISK MANAGER *****
1320 REM ***** STOS DISK MANAGER *****
1330 REM ***** STOS DISK MANAGER *****
1340 REM ***** STOS DISK MANAGER *****
1350 REM ***** STOS DISK MANAGER *****
1360 REM ***** STOS DISK MANAGER *****
1370 REM ***** STOS DISK MANAGER *****
1380 REM ***** STOS DISK MANAGER *****
1390 REM ***** STOS DISK MANAGER *****
1400 REM ***** STOS DISK MANAGER *****
1410 REM ***** STOS DISK MANAGER *****
1420 REM ***** STOS DISK MANAGER *****
1430 REM ***** STOS DISK MANAGER *****
1440 REM ***** STOS DISK MANAGER *****
1450 REM ***** STOS DISK MANAGER *****
1460 REM ***** STOS DISK MANAGER *****
1470 REM ***** STOS DISK MANAGER *****
1480 REM ***** STOS DISK MANAGER *****
1490 REM ***** STOS DISK MANAGER *****
1500 REM ***** STOS DISK MANAGER *****
1510 REM ***** STOS DISK MANAGER *****
1520 REM ***** STOS DISK MANAGER *****
1530 REM ***** STOS DISK MANAGER *****
1540 REM ***** STOS DISK MANAGER *****
1550 REM ***** STOS DISK MANAGER *****
1560 REM ***** STOS DISK MANAGER *****
1570 REM ***** STOS DISK MANAGER *****
1580 REM ***** STOS DISK MANAGER *****
1590 REM ***** STOS DISK MANAGER *****
1600 REM ***** STOS DISK MANAGER *****
1610 REM ***** STOS DISK MANAGER *****
1620 REM ***** STOS DISK MANAGER *****
1630 REM ***** STOS DISK MANAGER *****
1640 REM ***** STOS DISK MANAGER *****
1650 REM ***** STOS DISK MANAGER *****
1660 REM ***** STOS DISK MANAGER *****
1670 REM ***** STOS DISK MANAGER *****
1680 REM ***** STOS DISK MANAGER *****
1690 REM ***** STOS DISK MANAGER *****
1700 REM ***** STOS DISK MANAGER *****
1710 REM ***** STOS DISK MANAGER *****
1720 REM ***** STOS DISK MANAGER *****
1730 REM ***** STOS DISK MANAGER *****
1740 REM ***** STOS DISK MANAGER *****
1750 REM ***** STOS DISK MANAGER *****
1760 REM ***** STOS DISK MANAGER *****
1770 REM ***** STOS DISK MANAGER *****
1780 REM ***** STOS DISK MANAGER *****
1790 REM ***** STOS DISK MANAGER *****
1800 REM ***** STOS DISK MANAGER *****
1810 REM ***** STOS DISK MANAGER *****
1820 REM ***** STOS DISK MANAGER *****
1830 REM ***** STOS DISK MANAGER *****
1840 REM ***** STOS DISK MANAGER *****
1850 REM ***** STOS DISK MANAGER *****
1860 REM ***** STOS DISK MANAGER *****
1870 REM ***** STOS DISK MANAGER *****
1880 REM ***** STOS DISK MANAGER *****
1890 REM ***** STOS DISK MANAGER *****
1900 REM ***** STOS DISK MANAGER *****
1910 REM ***** STOS DISK MANAGER *****
1920 REM ***** STOS DISK MANAGER *****
1930 REM ***** STOS DISK MANAGER *****
1940 REM ***** STOS DISK MANAGER *****
1950 REM ***** STOS DISK MANAGER *****
1960 REM ***** STOS DISK MANAGER *****
1970 REM ***** STOS DISK MANAGER *****
1980 REM ***** STOS DISK MANAGER *****
1990 REM ***** STOS DISK MANAGER *****
2000 REM ***** STOS DISK MANAGER *****

```

Listing 1 - a Disk Manager in STOS

Opposite - can you guess the Secret Code?

```

10 rem SECRET CODE - By Dion Star
20 rem *****
30 rem
40 dim B(4),CODE(4)
50 c1a : key off : hide : curs on
60 for I=1 to 4
70 CODE(I)=val(i)
80 next I
90 nose : inverse on : : centre "SECRET CODE" : inverse off : print
100 locate 0,2 : device "Number there and in right place"
110 locate 0,3 : device "Number there and in wrong place"
120 draw 0,5a to 319,5a
130 locate 0,5 : device "You have to guess a four digit number." : print : print

140 centre "Each digit must be between 0 and 9." : print : print
150 centre "You have 10 chances."
160 draw 0,5a to 319,5a
170 draw 0,17a to 319,17a
180 print
190 for B=1 to 10
200 B1=0 : M=0
210 locate 4,0=10
220 print "Type guess"16(space116) : locate 21,0=10 : input "1:"BUEEEE
230 if len(BUEEEE)=4 then print : centre "Enter 4 digits!" : curs off : wait 40
: curs on : locate 0,curs : print space$(59) : goto 210
240 for J=1 to 4 : G(1)=asc(mid$BUEEEE,J,1)=48
250 if G(1)=0 or G(1)=9 then print : centre "0 to 9 only!" : curs off : wait 40
: curs on : locate 0,curs : print space$(59) : goto 210
260 next J
270 for B=1 to 4 : if B(1)=CODE(1) then B1=B1+1
280 if B1=4 then locate 0,22 : centre "Well done - you've done it!" : goto 440
290 next B
300 for B=1 to 4
310 for B=1 to 4
320 if CODE(B)=B(X) then M1=M1+1 : B(X)=4 : goto 240
330 next B
340 next M
350 M1=M1-B1
360 locate 50,4=10
370 Z=0
380 if M1<1 then 400
390 for B=1 to B1 : print "B" : : loc Z : next B
400 if M1=1 then 420
410 for C=1 to M1 : print "" : : loc Z : next C
420 if Z=4 then print "-" : : loc Z : goto 420
430 next B
440 for A=1 to 4 : ANSWER=ANSWER+str$(CODE(A)) : next A : ANSWER=ANSWER+" "
450 locate 0,22 : centre "Too Bad! The answer is "ANSWER
460 locate 0,24 : curs off : centre "Do you want to play again ? (Y/N)"
470 Allways : if upper$(AB)="Y" then goto 50 else if upper$(AB)="N" then goto
480
490 goto 470
490 default : and

```