Codetapper's C64 Site

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Commodore 64 » Diary of a Game » Paradroid

Paradroid

Andrew Braybrook published a 4-part 'diary of a game' called 'Birth of a Paradroid' in ZZAP!64 magazine from issue 3 (July 1985) to issue 6 (October 1985). Paradroid went on to receive a gold medal award with a 97% rating in ZZAP!64 issue 7 (November 1985).

Birth of a Paradroid Part 1   11/11/2020

The first part of Andrew Braybrook's diary as he provides a unique insight into the way Paradroid was created.

Birth of a Paradroid Part 2   11/11/2020

Having forgotten his fight with the cat and the lost ruler, Andrew turns to the more interesting aspects of programming like pencil chewing.

Birth of a Paradroid Part 3   11/11/2020

Andrew suffers from errant disk drives and missing robots, but at least Kenny Everett is looking better...

Birth of a Paradroid Part 4   11/11/2020

Here is the final part of Andrew Braybrook's diary of events leading up to the completion of his new game Paradroid.

Zzap Paradroid Review   11/11/2020

Paradroid was reviewed by ZZAP!64 in issue 7 (November 1985) and received a gold medal award, earning 97%!
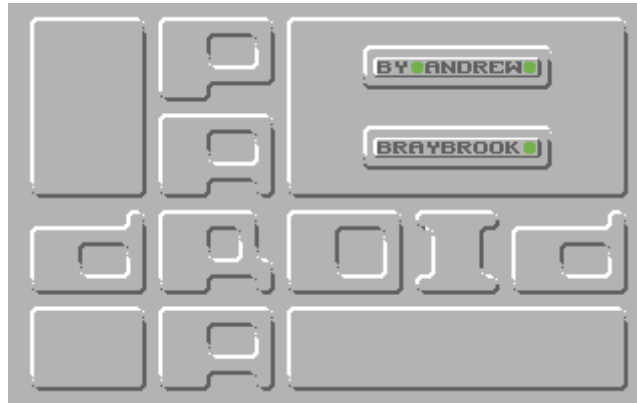
Codetapper's C64 Site

Birth of a Paradroid Part 1

Over the next few months we're running a special series of features covering in detail the way a computer game is developed. We shall be following its programming, production and promotion actually through the eyes of the people concerned. The game we've selected for the job is the new one planned by HEWSON CONSULTANTS, provisionally called *PARADROID,* which is due for release in the autumn. It's being written by Hewson's ANDREW BRAYBROOK, whose previous game *GRIBBLY'S DAY OUT* gets a Sizzler review in this issue. This month we're printing the first of several extracts from Andrew's diary. By the time the series is complete you'll have obtained a unique insight into the way a software house goes about its work.

The thinking behind the game
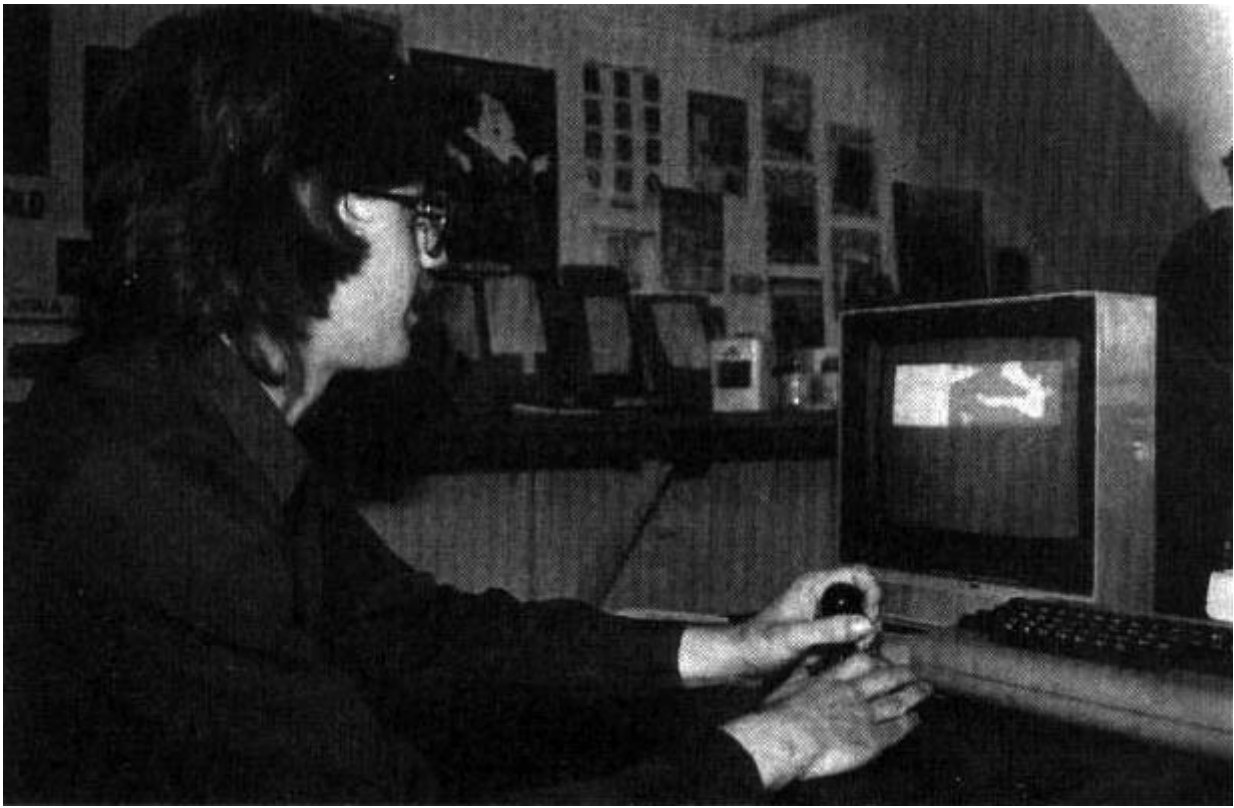
A study in concentration. Andrew Braybrook at work on the 64.

Here's Andrew Braybrook's explanation of his plans for *Paradroid*:

Gribbly's was all cute so this one is going to be high-tech. It is based around a large space ship. What you actually play on is a scrolling large-scale view of one of the decks, seen from above.

You'll be able to access a plan of the whole deck but you won't be able to see the details on that. Another screen will be a side view of the ship so you can see where the deck is in relation to the whole ship. Other views include logging on to the ship's computer.

The thing you actually play with are robots shown from above. There's going to be lots of them. If you want to know more about a particular robot what you do is log-on to a computer terminal. From there you can sift through all the robots and get large side view pictures and you can select things to get more information.

I've been working hard on it for about four weeks, but I was working on utilities - programs to help make the finished game - for a couple of weeks before that. I always like to do the character set first because it buys time while you're thinking about the rest of it. It's probably the easiest thing that you can do.

It's not really an arcade adventure - it leans more towards arcade. *Gribbly's* I wanted to be a non-violent game. All of the zapping and violence that I couldn't get into *Gribbly's* will be going into this one.

Last week we designed the game's 20-deck space-ship, but I'd like to actually build one just to make sure it all works - all the lift shafts tie up and the decks fit together. Maybe I'll try using Lego. Dunno, it might work.

So far I've got a little robot skating about inside a test deck plan. You can log onto a console, select an option, make an enquiry on the test robot and get a big picture of it. The piccie uses all eight sprites combined (the maximum available on the 64 at any one time). Despite being a view from above, I intend you won't be able to see anything behind a wall. You'll have to go into a room to actually explore it.

Wednesday May 1, 1985

Zzap 64 have asked me to keep a diary and today I have to start it. Feel like a mega-star. Decide not to let it change my life.

Design form on which to lay out my robot data detailing which sprites make the picture and other bits and pieces. Feed it into Easyscript and run off a few copies. Feel pleased because it's cheaper than photocopies.

Decide I need a bank of words to choose from to describe each robot. Write a Basic program to load in the codes. Rediscover how much I hate Basic programs.

Spend half an hour at end of day trying to think of something interesting to write in new diary. Fail.

Thursday May 2, 1985

Must prepare working copy of game to date to give to Robert (chief test pilot) for his comments before weekend. Suddenly realise this means writing and debugging complete console log-on procedure. Decide not to panic.

Grill Steve (Steve Turner is another Hewson programmer) on how he did the scroll in Avalon. Decide to do console on same lines. Have to design meaningful looking icons. Not easy. True test comes when someone tries to identify them.

Friday May 3, 1985

Get menu screen working so that icons appear and are correctly highlighted. Feel pleased.

Find error in robot display routine. Fix it and a six-sprite robot appears in all its glory. Great!

Program is just about stable enough for Robert at end of day. Everything has gone well. Too well. Robert has a habit of mangling things that I write.

Tuesday May 7, 1985

Arrive fresh and keen after the extra day off. Have bought my own C64 at last. No need to stay behind 'til ten o'clock playing games any more. Only cost me Â£139. Feel a bit disloyal towards my old Dragon 32.

Got comments back this morning from Robert (our chief Test Pilot). Not too bad considering. Scribbled some notes on the changes necessary. The main robot graphic was indistinct on his TV and as this will be on the screen nearly all the time it will have to be enhanced. Also wrote routine to display the small scale map.

Also in the post was a new cartridge Monitor program which I'd ordered. (A Monitor program lets you look at what the C64 is doing by displaying memory and registers, etc on the screen - Ed.) Perhaps it's my lucky day? It looks useful with lots of juicy commands in it. However the game must be altered a bit internally to fit the Monitor - it'll have to save some of its variables elsewhere. Haven't decided where yet.

Overall the day has been a bit slow but pretty good nonetheless because of the arrival of the new tool.

Wednesday May 8, 1985

Mapped out the side elevation of the ship and designed some graphics to display decks and lifts. Worked hard on the routine which draws the deck plan to convince it that it can also draw the side views. It listened to me in the end. At least I think it did. No doubt it's got some nasty trick up its sleeve even now.

The space ship had to be shortened to fit the full side view on to the screen - I used a bit of artistic licence and felt happy with the result.

Oh no! The first accident with the new Monitor. All today's graphics in jeopardy when the Monitor decides to lock up. I hit the reset switches (both of them - one on the Monitor cartridge and one on the C64) to try and rescue things but to no effect. I sit fuming at the machine.

Up jumps Steve Turner with a bright idea. Two or three times a week we get a mains spike (courtesy of the electricity board) which causes the C64 to crash but with its memory still intact. Perhaps if we generate a spike of our own I can regain control of the machine...

Decide against ringing the CEGB to ask them to switch off a power station or two. Instead Steve starts leaping round the room switching the fan heater on and off. Very entertaining. Needless to say it doesn't work.

Eventually Steve begins to tire. I give up and pull the plug out. Nothing for it but to key the stuff in again...

At the end of the day I start coding the map of the side elevation of the ship in hex (a number system used extensively in machine code programming). This time I do it on paper first. I'm not going to trust that Monitor again for a while.

Thursday May 9, 1985

Continued with the hex of the side elevation and keyed in some new routines which decode the deck data into a plan view. Did some other mods which Robert suggested.

More fun and games. I discover that my Assembler (the program which generates machine code from the programmer's assembly code) won't work with the new Monitor despite claims to the contrary by the manufacturers. Consider merits of abusive phone call. Decide such action would not fit my image and wouldn't do any good anyway. Resign myself to lots of plugging and unplugging of the cartridge every time I want to assemble. Lay plans to wire up or buy some hardware to fix the problem. In the meantime write myself a note in capital letters REMEMBER TO UNPLUG BEFORE ASSEMBLY. I only forget every other time.

Despite problems cartridge works quite well and has already rescued me from one screen full of rubbish.

Time to assemble and have a look at progress to date. Aha! The small deck plans are not appearing on the screen. I scrabble through the code and after some head-scratching I discover the, er, deliberate error in the plan routine. Assemble again and Bingo! There they are. Wrong colours but still encouraging. Most other fixes appear to have worked, ie. not working as planned but not crashing the machine either.

Modern technology fails again. I attempt to straighten my shatterproof ruler and it shatters. Middle section flies past Steve's ear and frightens the cat. Can't find where it landed.

Monday May 13, 1985

Back to grindstone. Tackle deck plan and get it looking respectable but sideviews could do with dressing up. Not pretty enough yet.

Major graphics update takes most of afternoon. Design a new robot. It comes out looking like Kenny Everett with short legs. Ponder - do robots have beards? Decide to leave it for the moment.

Rage and frustration! Something in machine is eating characters and gobbling sprites. Decide to remain cool, calm and collected.

Doesn't make any difference. Nasty munching continues unabated.

Tuesday May 14, 1985

More frustration. About to test program when one of data files disappears from disk. Inspect. Machine tells me there are 667 blocks out of a possible 664 on disk. Decide this is not logical. Wonder how Dr Spock would cope.

Missing file is lost in seventh dimension of Commodore brain cells. Return to back up and key data in again avoiding Monitor in hope of not repeating this fiasco.

Back to graphics. Steve suggests my subtle grey colour scheme for side views is boring. Debate ensues. I lose. Try new psychedelic combinations. Eventually agree grudgingly to white, yellow, orange and red. I grumble.

Add some more graphics. Now diagonal lines are causing herring bone effect. Horrible. I'm going to have to change all graphics. Bleaaahh!

Wednesday May 15, 1985

Right. Today's the day. Can't delay any longer. Have to write the routine that hides the robots except when they're within sight (a bit like hiding the ghosts in Pacman except when they're in your corridor). Idea comes from a game called Survive which I wrote a few years ago on an IBM mainframe. Up to six players all trying to ram or shoot one another with two computer controlled assassins. You knew when there was another player on your level but you couldn't always see them. Never knew what was around the next corner. Great stuff!

Oh joy! Mid-afternoon and the routine is in and works first time. Steve claims that he was the one that thought how to make it work. Typical.

Next month:

Has Kenny Everett put a hex on Andrew's prog? Will Steve stop the cat from eating the ruler? Will the paranoid paradroid learn to shave? These and other questions will be answered next month!

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Birth of a Paradroid Part 2

We continue with our everyday story of programming folk as ANDREW BRAYBROOK, the man who wrote *GRIBBLY'S DAY OUT*, struggles over the creation of his next game for Hewson Consultants called *PARADROID*. Here we are given a privileged insight into what it must be like to cull from the keys of a Commodore 64 the trills and spills that will make a hit game. This month having forgotten his fight with the cat and the lost ruler, Andrew turns to the more interesting aspects of programming like pencil chewing.

Thursday May 16, 1985

Redesign consoles today. New ones are much more curved, less detailed in a way, but definitely clearer. THINKS ... Maybe I'll drop multi-colour mode and use 16 colours instead. HMMM... I need some orange anyway. Yes, then I can work on some less gaudy colour schemes including the greys.

Friday May 17, 1985

OH MY HEAD! Late start today, due to 'night on the town yesterday. Implement colour changes and design some more graphics. Get some very tasty pastel shades using clever pixel plotting. Looks good to me. there again, maybe it's the effect of the beer. Will it look okay on a poor quality TV Dunno.

Take a tape copy home for some screen shots.

Monday May 20, 1985

Rip out character animation routine carried over from *Gribbly's Day Out*. Implement clever new one. Squeeze three numeric counts into 1 byte and write a hefty routine to maintain all counts independently. Save a byte here, save a byte there. Get lots of lovely room for other stuff. Great!

Still don't know how the robots can be made to behave properly given all the different types that will be running around. This week is not going to get any easier.

Tuesday May 21, 1985

An average morning's contemplation until ...ZAP WHIZ POW ! An idea for a game within the main one, fighting for control of a new robot. Instead of just a graphical sequence showing the takeover of a new robot, why not have to play for it, you against the robot's brain? Base it on logic circuits and use some existing routines. A whole new game segment in a small space!

Wednesday May 22, 1985

Get stuck into new transfer game. Get screen setup working almost perfectly. Game is beautifully simple but under pressure it has great possibilities. Now I've gotto convince it not to give impossible setup situations, since it is relying on a stream of random numbers, courtesy of Sidney the sound chip.

Thursday May 23, 1985

Andrew Hewson - Consultant or Spy?

Finalise the screen setup for the transfer sequence. Work out which arrangements of play elements are impossible. Devise rules to ensure that they are never selected. Discover rules are very simple which makes life easier. Feel pleased.

Work out how to run the game itself and begin coding when Andrew Hewson drops in to spy on us. I proudly demonstrate the new creation. "What on earth is it?" he says. Not one of his most helpful, constructive of illuminating comments. I rage inwardly.

Friday May 24, 1985

Attempt to implement the mechanism that runs the transfer game. Do the design. Try to get it right. Scrawl some rough diagrams. Looks good

Write the code and try it out. What a mess! Study notes. Twit! Should have read notes more carefully when writing code. Make corrections. Ahaaa! Everything's nearly working except for annoying flicker.

Search for cause of flicker. No luck. Start to grumble. Search some more. Still; no luck. Grumble out loud.

Okay. Decide that annoying flicker is not going to get me annoyed. I can either get game working but with sprites that flicker, or I can get nice steady sprites but it won't work. I try grumbling REALLY LOUD. No

effect. This program is clearly deaf.

End of day. It's Friday and I'm tired. I go home. Grumbling and annoyed.

Monday May 27, 1985

Bank Holiday. Play a bit of Guardian. Mend joystick with four lumps a aluminium to stop contacts from bending. Study listing of transfer game whilst pretending to do something else SO as not to get annoyed.

Got it! A logical fault. Annoying flicker disappears. Am annoyed for not spotting fault earlier.

Get carried away. Can't see why one routine is called twice so decide to fix it so it doesn't mind being called twice rather than fix error properly. This is called the steam-roller solution. Calm down. Feel guilty about steam-rollering.

Tuesday May 28, 1985

Work on getting the transfer game looking vaguely presentable for some more screen photographs. Put in a lot of icing like displaying the number of gizmoes left and a countdown to game start etc. Game now takes up about 2K bytes and is bigger than had hoped. I'll have to squeeze it in somehow.

Wednesday May 29, 1985

Study transfer game. Tune up speed and duration. Robot player has no intelligence so give it a couple more shots on average to make up for stupid moves. Change colour of robot player from blue to purple to show details better.

Decide transfer game can now be shelved for later inclusion in main sequence. Sit back and enjoy a warm glow of self-satisfaction. Decide to reward myself by having fun designing logo to appear on side of main spaceship. Fiddle with R.F. for Robot Freight.

End of day. All attempts at logo are garbage. Warm glow fades.

Thursday May 30, 1985

Sorted out some bits of documentation about *Gribbly's Day Out* and tidied them up. Got the new screen shots back, still underexposed, this game is going to cause people problems because of its white background, chuckle!

Back to main game. Do some more graphics - a better looking lift, a block of consoles and some different floor sections. Work out what information is required to get the lifts functioning, not much fortunately.

Friday May 31, 1985

Key in lift shaft routine. Reorganise the screen setup routine tidying up all the initialisation activities. Up to now have been working on test data. Now things are getting serious.

Decide I have to key in some real decks. Suck my pencil whilst considering the problems of lift co-ordination between decks. Hmmmm ... definitely going to be complicated. Some hard thinking yields immediate results - I get a mouthful of pencil shavings.

Oh happy day! GDO gets Game of the Month in CCI. Decide this is a good opportunity to ask boss (Steve Turner) for new pencil.

Tuesday June 4, 1985

Doom and gloom this morning. Program keeps on crashing. Slog through code finding several errors Serves me right for rushing through it yesterday.

Eventually I can tour around all the decks and use lifts if I'm careful. Worry about excessive pause on leaving lift whilst machine sets up current deck. Decide to do setup whilst in lift. A lot of extra work but result is nice. Very elegant.

Eeerk! Thunder and lightning in the outside world. Take fright at possibility of losing all today's work due to power surge. Scramble to save everything in sight, (Andrew was obviously luckier than we were, the same lightning-induced power surges caused the ZZAP! computers to crash taking several K of unsaved copy and subscribers with them. Much shouting and cursing and retyping! -Ed)

Having a bit of trouble telling the difference between orange and red as an alert status. Since green, yellow, orange and red are traditional, this could be a problem. Commodore orange isn't bright enough.

Wednesday June 5, 1985

New pencil arrives. Chew on it whilst considering how to shuffle storage to give more space for deck data. Assign last 4K. More changes will require a goodly amount of pushing and shoving from now on.

Work out mechanics of enemy robots. Many will operate on a network of invisible roads and junctions. Some may be sentries, others just 'on-the-beat'. The whole ship will have its robot crew defined at the start, and each decks-worth will be expanded and used on entry to that deck. Each deck will have a main variety of robot, along with a random selection of others.

Thursday June 6, 1985

Continue to scribble robot notes. Steve suggests a neat way of compressing three bytes of information into one. He's a bright lad. Gives me a lot of patrol routes and junctions. Reminds me of my IBM mainframe game Survive.

Hmmmm... a problem. What happens if a robot wants to come onto the screen when all eight sprites are already busy? In GDO I kill the new object and nobody notices. I could lose it temporarily and let it reappear next time you visit the deck. No, better not. Someone's bound to notice and moan about it.

Need something to speed things up when most robots on a deck are gone, such as the baiters in Defender. Have to sleep on that one. Nearly redefine the walk to show a 3D aspect, but don't want to do everything in 3D. Decide it looks a bit too ugly. It's been very much a thinking day.

Friday June 7, 1985

Off to the Commodore Show in London to spy on the opposition! Don't see anything particularly devastating. Enjoy listening to the music played by Jeff Minter.

Monday June 10, 1985

Steve's out today, so get to work on a pretty title screen. Do some drawings and like them. Try same on screen. No. Not right. Dabble for a while with graphics on screen and come up with a different style of letters. Not bad. I want it to look like the letters are stamped on metal. Use part of Commodore graphics set for first time ever.

Tuesday June 11, 1985

Oh, oh oh oh oh! Behold! An idea. Why not use work from title screen for deck walls? Leap around room full of brilliance or insight. Steve tuts and hisses at disturbance.

Calm down, try a small setup. Nag Steve to look at possibilities. Decide to try a whole deck in new scheme. Hack, hack, hack for ages and then fire up new version. What a transformation! Very metal, superb and solid. Stop for a cup of tea to celebrate progress.

Set up some alternative colour sets and, using light colours for background, now have schemes in yellow, green, red and blue. Game now looks totally different, although consoles and lifts work well with the new set. So just by chance and by doodling on the character set editor, the game has undergone a major change in appearance.

Much self-satisfaction with new look. Nobody commented either way on the previous look, except to say that it's different, ie politely saying that they don't exactly go overboard on it.

Burn the heretics, I say. Drown the non-believers!

Wednesday June 12, 1985

Old turbo saving routine must make way for tables of data. Five minute job think to myself. Hours later I'm still hacking at them. Curse myself for patching and fixing them in the past without recording the changes.

After much disk and tape loading and saving the new turbo works properly. Fix a couple of small details in the game. It now takes 20 minutes to assemble the game from source, it's just so s-l-o-w and when it finds an error right at the end - aaaarrgh!

Next month:

How long can Andrew's new pencil possibly last? Will the Commodore character set survive the launch into space? Will the cat ever come back? Will we ever see a Paradroid? These questions and more may be answered next month, who knows?

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Birth of a Paradroid Part 3

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Thursday June 13, 1985

Decide today that the doors on the ship didn't look good enough. Played about on the graphics editor with intent to draw the doors in the same style as the walls. Had to alter the door routines to handle the doors differently, and needless to say, on the first attempt got it wrong. Vertical doors worked as intended, but I forgot that horizontal doors were done differently. Also changed the alert status block to be in the same style.

Friday June 14, 1985

Redesigned the graphics for the side elevation to get rid of the herringbone effect. Used the same style for the rest of the deck plans. It's nice to have a style for the whole thing, otherwise it starts to look like a hotchpotch of all sorts of meaningless patterns, rather like many platform games these days! The side view plan also required alterations to fit the new graphics, and looks very tasteful indeed. Sneakily altered ST's gory sunset colour scheme to a blue decor, much nicer. No taste that bloke!

Designed two new robots to look on the robot enquiry screen, a dumpy little litter cleaning beastie, and a huge sentinel droid. Get past that if you can. The system is holding up well with the input of more words and pictures and has not faltered yet.

I also wanted a nice dark and dingy grey colour scheme for some decks. Used dark and middle greys all over the place, and black. Didn't look dark enough until brightened the border to yellow, which gives a better contrast. The lighter the border, the darker the on-screen colours appear to be, and vice versa.

Monday June 17, 1985
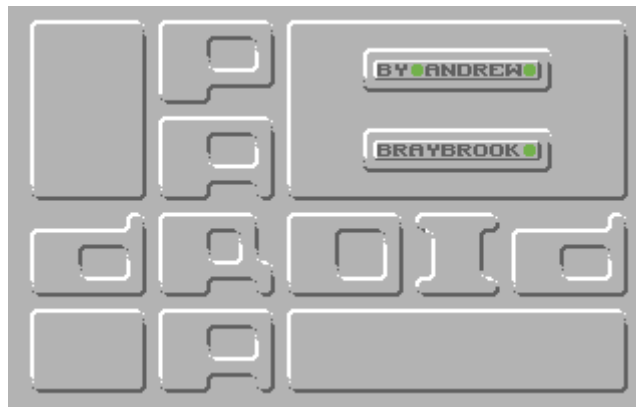
Paradroid's opening screen, with the metalic 'relief' effect on the lettering.

Keyed in some new characters that I had designed at home yesterday for the new consoles, again in the same style as even/thing else. Also keyed in the data for the title screen, with PARADROID written in giant-sized letters. Since this data is only required one in a blue moon, I've found a nice little cubby-hole in the C64 for it, along with some seldom required text. Thus my plan to use 68K of the C64's memory is realised! I'm using the 64K RAM and 4K of I/O devices. Had to do some fancy RAM bank switching during the game, but it leaves more room for important things.

Also mended one or two little errors that I had noticed and after some minor modifications, the title screen appears. Looks good.

Lo and behold, half past four, and Commodore strikes again. Entire user-defined character set disappears from disk. Directory says it's still there, 9 blocks long, except that there are now 673 blocks on the disk, 9 more than physically possible. Great, thanks a lot guys! I really wanted to key in the console data again. This sort of thing really annoys me. Can't anybody write a decent reliable operating system?

Tuesday June 18, 1985
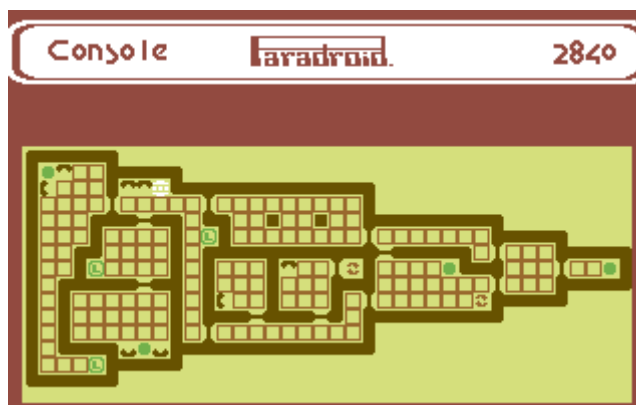
Plan view of one of the decks.

Changed most of the small-scale deck plan graphics, as they were looking rather ugly, still reflecting the old look of the ship. Simplification is the order of the day. It's no good being overcomplicated if you need a magnifying glass to see what's happening. Now the small plans look sleek and modern, much better.

Sat down and scribbled some more routines to run the robots. The same routine can also handle explosions and bullets, except ... What do I want the bullets to look like? They must look OK travelling in any direction. Do I want them animated, and to change colour? The answer to these questions is, possibly.

I'd like the different robots to use different weapons. From simple shells to electric clouds and energy blasts. Thus some robots will be very difficult to tangle with, spitting doom and disaster all over the place.

Tried to draw some bullets on the sprite editor. Some days you can sit for hours and not come up with a decent graphic. This is one of those afternoons. Inspiration has failed. Best to leave it for a while.

Wednesday June 19, 1985

Worked out some lively-looking routes for patrolling robots to zoom about on, and marked them on my maps. Then took my robot round to all the patrol junctions and noted the co-ordinates. Finally keyed the points and valid directions from them into the assembler.

Lifted a few more useful routines out of *Gribbly's* that used to run the Meanies and after several adjustments they should be capable of running the robots, missiles and explosions. Think I'll start off with a simple demonstration that can just display some static robots. No point in being too ambitious at the moment. So many new routines and data need to be co-ordinated just to introduce one new element into the game. I'll wait until tomorrow before I try to assemble all of this. I'm sure it'll put up a fight!

Thursday June 20, 1985

Put in the last few bits and assemble it all. Fired it up, and on attempting to display an enemy robot we get... a blank screen. Restore doesn't recover it, neither does the reset switch. Load it all in again, same thing happens. Try cutting out different suspect routines, each time it either gives me a blank screen or a mess. Spent most of the day staring at routines that were swiped from *Gribbly's* and must therefore work. Even ST supersleuth can't find anything wrong with them. I can't isolate which lump is causing the crash. I can't even think what sort of error can cause this type of crash.

At about 4:30pm I was dreading going home, as I get nightmares when I can't find mistakes in my programs. I mentally scan all the possibilities and usually find it in the end, at the cost of a night's sleep. On skipping through an ancient routine that I keyed in weeks ago knowing I'd need it later, I discovered on close inspection a single one-byte instruction that caused all the damage. It's one of the most devastating single instructions known to mankind, the PLA. One of them too many and it's goodnight forever! Feel very, very relieved at finding error made when copying it across by hand.

"Not quite sure why it thinks it's necessary to blank the screen when it crashes. Perhaps it's just embarrassment. It doesn't help to diagnose things when you can't see anything."

Friday June 21, 1985

Amended the sprite display routine and got to grips with the collision detect and handle routines. These together analyse what object is touching another, and deal with it accordingly. Such things as robots exploding when shot are handled by this. Got that wrong as well! First time, instead of the gunsight causing explosions, I had to ram the other robots with mine to blow them up. That was quite good fun. I think I'll incorporate it into the game. After all, the big battle robots would be able to just barge past the litter clearing robots.

Managed to get another PLA instruction into the proceedings, which had a similar effect to yesterday's one. Not quite sure why it thinks it's necessary to blank the screen when it crashes. Perhaps it's just embarrassment. It doesn't help to diagnose things when you can't see anything.

Monday June 24, 1985

Tidied up the sprites for the robots currently in the game. Only five so far. Kenny Everett now looks a bit more like a robot.

The task within the game is becoming more concrete now, and with the fixing of the sprite collision routine, a certain amount of game tuning can begin. This is the part that many programmers don't bother with at all, witness the reversing witch in Cauldron. Rather like building a Rolls Royce, then not tuning the engine at all. The object of the exercise is supposed to be to make the game as playable as possible. Is it easy for many people of differing abilities to play? Pottered about for some time, experimenting with speed and acceleration of the gunsight. Might have to make it slower.

CEGB caused machine crash at lunchtime. Thunderstorm caused another crash later in the afternoon.

Tuesday June 25, 1985

Put in the robot patrolling routine. Fired it up with great air of anticipation. I've been thinking about this for weeks. Could it possibly work first time? Just caught a glimpse of a couple of robots as they hurled selves off the screen at breakneck speed. Change decks. 'Hi guys.' Vvoom, gone. The ones on deck one however are just sitting there, contemplating, but never moving. I can make the robots reverse direction if I can get in their way before they migrate. Occasionally one leaps across the screen, but rather fast. They take little or no notice of my patrol points and as for the walls and doors, they are totally ignored.

Wednesday June 26, 1985

Discovered the bugs in the patrolling routine. Upon correction I observed several robots wobbling along the predefined courses, shudder as they make up their minds at the corners, then toddle off in another direction. Followed a couple of them all over the deck and observed a number of unforeseen problems.

1. Upon meeting, two robots instead of bouncing off each other, lock together in mortal combat.
2. Robots slowly drift off their courses until they are in great danger of missing the junctions altogether.
3. The robots are so fast that it is nigh on impossible to shoot them.

Of these, the first two are fairly easily cured by more careful programming. The third problem is one of design. If the game system doesn't give you a more than adequate ability to complete the task in hand, then either the game must be made easier, or the weapon more powerful.

Thursday June 27, 1985

Robots are now moving along their pre-set courses. They pause at junctions as if they are looking around, then move off. They also wait for the doors to open before going through them, which is jolly decent of

them. The whole game is looking more complete. I've slowed some of the robots down to keep them on the patrol routes, and hopefully make them easier to thump.

Friday June 28, 1985

First day working at home as ST has gone on holiday for the fortnight. Tried to assemble game after making some changes. My disk drive seems to be causing problems. After 20 minutes of assembling with no errors, it didn't produce an output file. Feels rather like landing on Mars and finding someone's been there already. All that effort for nothing.

Assumed that the disk was worn out. Copied everything I could to another disk and reassembled. Finally produce an output file. Load the code in, with anticipation. *%!$&*! Now the data files such as the character sets and deck plans won't load. Two duff disks? I don't think so. Tried loading some other disks. Seems to be labouring somewhat. Seems to be a 50/50 chance of loading something even slower than normal, or not at all. Panic. Why didn't I bring ST's disk drive home?

Sunday June 30, 1985 Supplemental

Race over to Robert's house with disk drive. Confirm that my drive can't load files properly. Try assembling new code on Robert's drive. No output file produced. The plot thickens. Robert has some useful utility programs to try. Disk doctor program reveals that one disk has a bad track and is thus faulty. A head alignment program confirms that my disk drive has a bad head alignment. I expect it of Commodore tape decks, but not the disk drives.

Monday July 1, 1985

No it's not Kenny Everett, nor is it Steve Turner's holiday postcard - this smiling, relaxed face is that of none other than Andrew Braybrook having just recovered a piece of missing code.

Get good old reliable disk drive from ST's house and painstakingly copy all source files to a new disk for the umpteenth time. Finally assemble all the game to see the effect of the changes made last Friday morning. I think things have returned to normal at last. Designed some more graphics for the shuttle ship and two landing vehicles for the cargo decks. Have now mapped out on paper most of the other decks.

Now I have to sit down and convert them into computer data, which is just a case of hard graft.

Tuesday July 2, 1985

Converted the remaining twelve decks into hex and keyed them in. Took about five hours for each process. Boredom set in towards the end. Lucky Wimbledon was on TV. Fiddled the game to start me off on each deck in turn. Only two came out as planned. The rest had some errors in them, causing some very weird deck layouts indeed. Nothing that can't be cured. The shuttle ship and landing vehicles look as different as intended, very pleasing. In carrying out all the new changes only one disk file managed to get mangled by the operating system, wouldn't mind, but it wasn't even one that I had changed recently.

Wednesday July 3, 1985
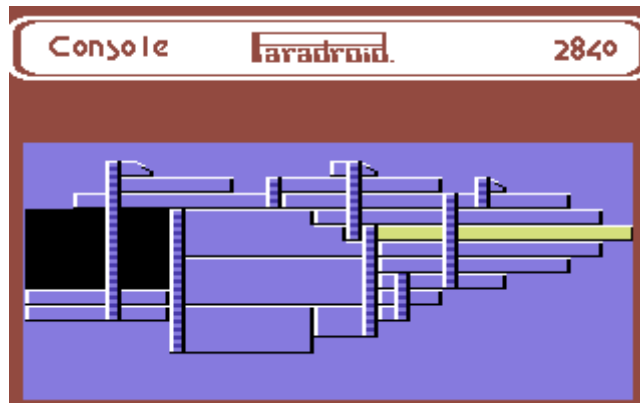
A schematic side view of the space ship showing each deck and the lift shafts.

Corrected the new deck data then wandered around, noting the lift locations to tie in with the lift routines. Forgot one of the limitations of the system that says lift shafts mustn't be placed at the very top of the deck. Had to alter two decks of data to cure that one. Noticed also that one particular shaft is marked on the side view as accessing five decks, whereas it should access three.

I seem to have become nocturnal working at home. With no fixed hours I now work from 11am to 5pm then 9pm to around 2am. Having just realised that there's only four weeks to go to my expected finish date, things are starting to go into overdrive.

Thursday July 4, 1985

Worked out the robot patrol points for the new decks and sat in the garden converting them into hex. Another four pages of gobble-de-gook roll off the production line and are then keyed in. Found one or two stray robots upon touring around, and found the errors that caused them to end, up leaning drunkenly against a wall.

Still can't think of a way of prettying-up the console menu screen. It looks rather boring at the moment.

Friday July 5, 1985

Activated the 'hidden robot removal' routine for the first time. After correcting the usual 'Did it really want that value preserved in register?' error, it's working fine. Rather disconcerting to watch as anything going out of view disappears, all at once as opposed to sliding out of view. One thing I forgot was that robots in adjacent rooms which you can't see, open doors which you can't see opening. This again is rather

disconcerting. It should be OK like that though, as it gives you more advanced warning of approaching meanies. Have to see how the test-pilots react.

Received a postcard from ST on holiday. He'd apparently had as much fun as me last Friday. A true tale of disaster.

Monday July 8, 1985

Designed and implemented another seven robots. I'm exaggerating their designs to suit their purposes to make them more obvious and different. Some of the robots, when seen 'bolted together' for the first time look rather different from my expectations. Their colour schemes affect this considerably. Some look better, some not. Two of the new robots require alterations due to them looking dreadful. Others spark off ideas for new robots. Anyway, twelve down, twelve to go. Also designed a small block to decorate the store rooms, and prepared a lot of changes to the code.

"Unfortunately since the other robots damage each other, the little robots get duffed up by the bigger ones before I can get to them! "

Tuesday July 9, 1985

The Paradroid font with m and w letters twice as wide as the others.

Gave most of this month's diary to the word processor to eat. It seemed to enjoy it. Spent the rest of the day (and night) arranging the pre-game screens into small enough sections to fit into the space on the screen Towards the end of the fourth page I totted up how much memory this would all take. I'd allowed about 2K or 2048 letters! That really doesn't go very far. Realise very soon that I need more like 4K. Fortunately the space saved by the smaller patrol-routes table can be used for the title screen, which leaves me with 4K under the I/O devices, (SID, VIC and the CIA twins), for the new text.

Arranged the text neatly like a word processor would, which involved a lot of vigorous rubbing out and rewriting. In my current character set the small 'm' and 'w' letters are twice as wide as the others, which makes things more awkward. I suppose that was my own choice. Can't blame anyone else for that.

Wednesday July 10, 1985

Keyed the new text into my Basic ASCII to AB codes converter, and after 3K of instructions had been entered, I had to dunk my typing finger in some cold water.

Got down to the meaty business of putting the new changes into the game. Had to amend nearly every file to source code, about twelve of them.

Thursday July 11, 1985

Tested the new amendments and made some further changes. Now it's time to incorporate the Transfer Game into the system to see how the game plays. Space is getting rather tight so I have to split the transfer game code into the two sections, one to be put into the main game, the other to set up the other end of the machine where there's some free space. This operation is going to be a long one, and because of its complexity, must be done in one session. Began this marathon session at about 7:00pm, having been working for most of the day already, but I was in the mood to get this done.

Time: 2:00am. After much chopping and changing, I've now got a workable program. The power flowing along the lines is now animated for the first time and works as hoped. I can now play the game roughly as it will be. Since it's deliberately difficult for a lowly servant droid to transfer to a great big hairy battle droid, the transfer is difficult. This is because you start off as the lowest of the low. First problem, where are all the lowly robots? Every robot so far has been a nasty security droid. Unfortunately since the other robots damage each other, the little robots get duffed up by the bigger ones before I can get to them!

Finally finish hacking at 7:30am. Watch a bit of Breakfast TV whilst waiting for the program to assemble. It's much more comfortable programming in the cool of the night.

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Codetapper's C64 Site

Commodore 64 » Diary of a Game » Paradroid » Part 4

Birth of a Paradroid Part 4

Here is the final part of Andrew Braybrook's diary of events leading up to the completion of his new game *Paradroid*, as the pace hots up to get it out in time...

Monday July 15, 1985

Finally discovered why the controlled robot doesn't bounce off the other robots. Seems I was a victim of my own brilliant idea. Anyway it's working now for the first time and makes the game a lot easier.

Had to get rid of the blue title screen colour scheme because I couldn't find another colour to write on it with. White was the only colour I could use, and that's not allowed because at one point I change the background to white. Put the program name at the top of the screen in fancy writing. Spelt that wrong in my haste.

Made up the first rough version for Andrew Hewson to look at. There's still a lot of data to be put right, mainly relating to the robot enquiries, and two important routines are still not in. One is the sound routine. This I shall swipe from *Gribbly's* at the appropriate time. The other is the firing of lasers, by the meanie robots.

Tuesday July 16, 1985

Corrected known errors in the patrol table and deck plans, and distributed some more 'decorative blocks' around some of the decks. On compiling the deck plans, I had only 2 bytes to spare out of 38/40 reserved. Close shave that.

Noted all the errors in the current version ready for update and then got down to organising the robot data. Printed off some more forms to assimilate all the data and filled some in with data on the 12 robots currently existing. Will have to extend the dictionary of words in the system for some new descriptions to go in.

Wednesday July 17, 1985

Designed some more sprites for the robot pictures, including messenger robots, a maintenance robot and the big meanie cyborg, the king of them all. Now have 17 of the 24 robots done. Had to think up descriptions for them all, and added another hundred new words into the bank of words. Keyed in the appropriate data for the descriptions and sprite displays, then fired up site game with the new data. Only 3 minor mistakes to correct, then everything looks great.

All the robot data is written on paper because it's the safest storage medium in the house, bar none!

Thursday July 18, 1985

Test pilots got their grubby mitts on a safe version of the game yesterday. The Verdict: quite unplayable. Getting the hang of it slowly but don't like it much.

The control mode has got quite complex and this is mainly due to the lack of a second fire button. Don't want to use the keyboard because it's inconvenient. Can't use 2 joysticks because not many people have 2 serviceable joysticks.

Large headache ensues from trying to think of a new easier control mode. Instead of pressing the button to choose which of the robot or the gunsight to move, they must each move independently but at the same time, and from the same input. Then just pressing fire will shoot the guns, activate transfer, log onto consoles and activate lifts! Can it be done?

One other problem of the control mode was that if you wanted to fire at an approaching robot, getting into fire mode was via transfer mode, so we tended to it by accident. I can prevent that by insisting that contact occurs for more consecutive cycles with the button down. Then you can move away or release the button if you don't want to transfer. Difficult problem to sort out, causes late night thinking session.

Friday July 19, 1985

Put in the new trial control mode. Only has 2 modes, mobile and transfer. The gunsight is supposed to behave intelligently and try to be where you want it all the time. Turned out to behave like a well-known flying hamburger: got a mind of its own, does what it wants, better success when you don't try to control it, and generally useless!

Ripped all that out and had a rethink. Simplicity being the order of the day, tried putting the gunsight on the screen in a position proportional to the speed that the robot is travelling at. Unfortunately the gunsight seemed to want to leave the screen instead of heading for the centre when stopped. Turned out to be because the robot doesn't really ever move, but the deck layout moves in the opposite direction to create the illusion of movement. Hacked about some more. Control mode still doesn't work.

Monday July 22, 1985

Got the new control mode working yesterday. Don't like it. Test pilots don't like it. Thought about it some more. Decided to design the last 7 robots instead. The last 7 are mainly the big meaty battle and security droids. Experimented with a couple more new-type appearances. Got some very nice-looking beasties out of the sprite editor.

Still don't know what to do with the control mode.

Tuesday July 23, 1985

Noticed that the last deck had an extra wall tacked on to it. Realised how it had got there and set about shortening the deck data. Had to remove 4 bytes. Managed to shave off a couple here and a couple there. Carried out what should be the penultimate graphics update, tidying up any loose ends and adding the final words into the text dictionary. Also put in data to display the last 7 robots correctly. Had to adjust the

appearance of 2 robots slightly. One of them appeared to have long black hair in curlers. Looked like the archetypal Mother-in-Law!

After much nocturnal thinking about the control mode, I've decided that the gunsight will have to go. The concept was rather elegant, but it's just not practical in a battle situation. You not only have to get firing direction right, but range as well. I think I'll have to revert to the old-fashioned, tried, trusted and medically proved eight directional dual laser. Thus Andi (second test pilot) will be able to fire a shot behind him as he runs away, as well as fire forwards to clear the escape route. This is because the gun will fire in the direction indicated by the joystick, and NOT by the direction of movement of the robot. The robot is slower to respond to the joystick because it has acceleration and momentum. This system should speed up the pace of the game considerably. I'll have to put my gunsight in another game sometime. Stay tuned!

Wednesday July 24, 1985

Improved the transfer game to display who is who. Since you can pick sides, it's easy to get confused. It now displays the appropriate robot sprites on each side. People who have played the transfer game don't like the tossing the coin situation if the transfer is a draw. They'd actually rather lose every time than leave it to a 50/50 chance. Strange! I'd rather have the chance myself. I could have a game option to alter the transfer draw-game situation. No. Think I'll give you a replay in this case, another chance to transfer.

Started work on the new laser firing routines. The only sticky bit is working out which sprite to display for lasers, which depends on which way you point them. I have 4 sets of 2 sprites of reversible twin lasers to pick from. Perhaps a random choice will be more likely to be correct than if I sit and think about it!

Discussed the possibility of making 'The film of the diary'. Decided that Harrison Ford would be ideal to play myself, with perhaps Woody Alien playing ST. Decided to abandon the scheme. They'd probably want more than a free copy of the game!

Thursday July 25, 1985

Put in the firing laser routine. Fired the correct images in all directions first time. It got a bit confused when no direction was set, and the laser bolts just sat on top of my robot.

ST then had the brilliant idea that any robot under control could fire its own weapons system. That presents the problem that many don't have weapons. Since the Influence Device that you ultimately control has a small laser turret on top, this could be used as a backup low-power weapon only. Upon transfer to an armed robot, that robot's weapon system takes over, and is more powerful. There will be 4 grades of weapons then, lower-power, twin laser, high power single laser, high power twin laser, and disrupter. The disrupter just hammers all robots in visual range that are not disrupter proof. Since other robots carry them too, they will be used against you.

The game has more speed now, as intended, so I'm feeling a lot happier about it.

Friday July 26, 1985

Tuned up the destructive powers of the different weapons. Cured the error that meant that shooting big robots with the 'Pea shooter' lasers actually gave them energy! Put in the enemy firing routine. Haven't worked out how to deduce the correct laser sprite for the right direction but it should at least fire something.

Instead it looked pretty similar to the previous version. They didn't fire anything at all. Increased their chance of firing, but nothing. Not interested. Must be pacifist robots.

Monday July 29, 1985

Found out why the robots weren't firing much. Double use of a variable. Fixed that. Also fixed the code that would have made them fire in exactly the opposite direction. Realised also that the clever-clogs routine to determine which angle lasers to display didn't work because when ST thought of it, he assumed that the 6510 chip would be the same as the Z80 when setting the carry flag after a subtract. Wrong! Totally the opposite.

Immediately the old robots really let fly, lasers, distributors, everything. All of a sudden, the ship becomes a battlefield.

You get everything your own way on the easy decks, the little robots can't fire, but as soon as you meet the big boys, whoomph. Needs plenty of tuning up, but it's looking good.

Tuesday July 30, 1985

Second pre-production copy sent off to Hewsons today. Just the sound routine and tuning up to go. Spend much of the day playtesting the game, looking for any faults. Found a couple of subtle errors and fixed them. Everything seems to be working as designed now. It's much tougher than before and still haven't managed to clear the whole ship of robots, although I've come fairly close. I'm beginning to form ideas about how to play it.

Gordon Hewson phoned to check on progress and suggested that instead of just being blown up when out of energy, if you're controlling another robot, it should be destroyed. Thus the Influence Device escapes to possibly fight on. This was such a good idea, and ties in with a similar result of transfer failure, that I put it in straight away. Your current robot explodes, leaving the Influence Device beneath, but with low energy. Thus, provided you avoid any remaining incoming shots life goes on.

Taking home the sound routine tonight to scribble some modifications, ready for keying in tomorrow.

Wednesday July 31, 1985

Altered 'ye-olde-faithfulle' sound routine to incorporate some new processing for more varied sound. Built a small test-bed program so as not to have to the whole game up just to invent some sounds.

Played about with some variables. Got it to sound like *Ancipital* then *Elite*. Cured a few bugs in the sound routine and started again. Got a sound that should be good for background noise, just left running when there aren't any other sounds to do.

It's quite difficult to listen to a sound that you like, say on TV, and then try to figure out how to get SIDney to mimic it. Cards on the table, I really can't cope with sound sometimes. It's just a case of trial and error, play with the variables until you hear something you like, then assign it to a particular event in the game.

Thursday August 1, 1985

Penultimate day today. Must finish by tomorrow evening. Got to grips with the sound routine today. Produced 27 sounds, including 2 that I hadn't intended to put in. Assigned all the sounds to their appropriate places in the program, and remove all the development calls, like the exit to the monitor. I need the last 1K memory which was for the monitor's benefit. Re-assembled the program with great anticipation. What a time to get another disk write error. Now it won't assemble. Had to transfer all the source files to another new disk.

Finally got the new supersonic version fired up. Many sounds seem slightly different from what I created. Upon inspection it appears that the sound routine has an error on it which didn't show up earlier. Fix that. Now it sounds almost as intended. Great!

Friday August 2, 1985

The final day. Decided to ditch the idea of music while the title screens are running. It seems that you need rather a lot of music to make it interesting. I haven't much space for a tune, no more than 150 notes on each of 3 voices, perhaps 20 seconds worth. Most people that I know switch the music off after a short time anyway, whatever game they're playing.

Decided to opt for a random sound generation system, as accidentally discovered yesterday. It's obvious that the sound chip knows much more about sound than I do, so I'll just let it use its own random numbers to generate sounds.

Having set that up, it sounds like robots conversing, in robot language of course, like R2D2 with a lot to say for himself.

Played the game looking for errors and cleared the whole ship with no fiddles for the first time. Spotted 1 or 2 items worthy of alteration, but nothing major.

Putting a version on cassette to send to Hewsons. Hopefully it will require no further alterations, and is thus complete for my pay, although much still needs to be done before it goes on sale.

Some notes and observations from Andrew Braybrook

At this point, the following items have been used in development:

- 2 Pads of A4 square paper
- 1 Pad of A4 lined paper (Mostly for this diary!)
- 15 Floppy disks (4 retired due to errors)
- 9 C15 cassettes
- 3 pencils (type H)
- 1 shatterproof ruler, (1 piece still not found)

- 1 quickshot II joystick (couldn't stand the strain)
- 300 sheets of print out paper (approx)
- 5 man-months of effort (850 man hours)

Also purchased for development:

- 1 hex calculator (invaluable)
- 1 monitor cartridge (useful)

At this point it is interesting to read the original scrawled notes on a small piece of writing paper that I wrote one evening all those months ago. Some ideas were curtailed for one reason or another, other ideas were amplified, but the overall direction of the game was there, although very little graphical detail had been thought of. Much of the game's look today occurred by trial and error and a certain amount of good fortune along the way.

Here is the original specification in full:

- Cute and hi-tech don't go together. Instead of robots, just use the digital specification numbers as per fighters in *Lunattack*.
- Player has access to detailed data specifications of robot.
- Player controls an 'influence' which may be transferred from robot to robot at a cost to the source robot's energy of a 'takeover' or 'dominate' cost of the robot to be taken over.
- The reverse process will be possible, provided sufficient robot energy is available.
- The new robot's energy value will not be known, of course, until transfer is complete.
- The weak robots cannot, say, take over the strongest, but have to climb a flexible ladder in stages.
- Build a picture of robot with data from bolt-together pieces.

Each robot has:

- Internal energy for all functions.
- Dominate value, based on robot's intelligence and power.
- Security class (Privilege) - allows access to computer data, security areas, etc.
- Armaments, or none.
- Mobility, maximum, but degraded by damage.
- Armour, protection from shots, not usually able to withstand 1 direct hit.
- Other miscellaneous background data. eg year of manufacture, model no.

Types of robot:

- Menial droids.
- Personal servants.
- Protocol.
- Ship maintenance.
- Security robots.
- Battle droids.
- Command robots.

From now on the story moves to Hewson Consultant's HQ in Abingdon, where Gordon Hewson takes it up.

Gordon's Story

Monday August 5, 1985

Paradroid arrives in the post as promised. Make mental note to thank Andrew and nip out the back to start playing it. Spend half an hour tracking down a free C64. We never seem to have enough machines.

Escape to a corner of the warehouse - noisy but away from the phone. Start playing. Oh yes, oh yes. It's really come together since I last saw it. Good old Andrew.

Start off shooting everything on sight. Then discover the transfer game. I use the lifts and wander all over the ship. Get a definite feeling of space.

Hmmmmm... An hour later and I decide I like the unique feel of arcade action and strategy but I'm unhappy about the joystick handling. Spend half an hour trying to pin point the problem for Andrew.

Right that's enough. I mustn't play this game all day there's work to do. Debbie says the roughs of the artwork (the picture to go on the cassette case and in the advertisement - Ed) arrived.

Oh disaster! Back at my next desk to study artwork and I hate it. Call in Debbie to discuss it in detail. We study the calendar and realise we have to act very rapidly if we are to change it.

Fix appointment with advertising agency for tomorrow. Tell Andrew (Hewson) the bad news. He isn't very pleased but it's too bad. If we are to fix this artwork we have to drop everything to get it done on time. End of day. Contemplate events. I hope we can fix this in time.

Tuesday August 6, 1985

To Brighton with Debbie to see advertising agency. What on earth made us choose an agency so far from our base in Oxford?

All day at agency struggling to describe to them what we need for *Paradroid*. Grab a pork pie for lunch - these business lunches are not all that they are cracked up to be!

Leave at 6:30 with a headache and a rumbling tummy. Stop to eat on the way home. Arrive at Andrew's house at 10pm to find him dozing in front of the television. He runs Debbie home and then we discuss the artwork problems over a cup of coffee. It's been a long day.

Wednesday August 7, 1985

Play *Paradroid* again. Tear myself away to phone Andy Braybrook and discuss handling problem. Many ideas thrown up and discarded. Decided it needs more thought.

Thursday August 8, 1985

Andrew (Hewson) is getting agitated. The press are enquiring about preview copies for *Paradroid*. We decide that we have to hold them off until the handling question is resolved. We've got a backlog of work to go through the word processor and Andrew's fidgeting about that too. Staff will insist on taking summer holidays! We decide that the *Paradroid* instructions must take precedence over other word processor work.

Friday August 9, 1985

Steve Turner rings to say that he and Andy Braybrook have been working hard on the handling. He sounds optimistic so maybe they've cracked it. I hope so.

Tuesday August 13, 1985

The new artwork roughs arrive. They're not too bad. Debbie and I spend hours pouring over them and then hours more on the phone to the agency.

Wednesday August 14, 1985

New version of *Paradroid* turns up but I have no time to play it. Today is the day when we are shipping the first commercial copies of Southern Bell (for the Spectrum). A month's worth of business all in one day because all the shops and distributors need stocking up. Everyone's working flat out.

We finish at about 7pm and I run up *Paradroid*. I get on really well and hit my highest ever score straight off. Yes, the handling is right. Perfect. Make it to the top robot - a 999 - and spend a violent 20 seconds blasting everything to kingdom come. Very satisfying.

Thursday August 15, 1985

Debbie orders the film master for the *Paradroid* bar code.

Friday August 16, 1985

The bar code master arrives. We're getting there. I look over our launch plans to get *Paradroid* into the shops on the 20th September. Andrew Hewson is busy organising screen shots, press releases, press copies and the like. We check out the print schedule. The stocks of cassettes, shells blank tape, library cases are checked by Bill, the Production Manager. One of our programmers, Mark Goodall, checks the mastering system and the security system.

Everything looks OK. We've got a lot of work to do by September 20th but it's under control. End of the day and we prepare to go home.
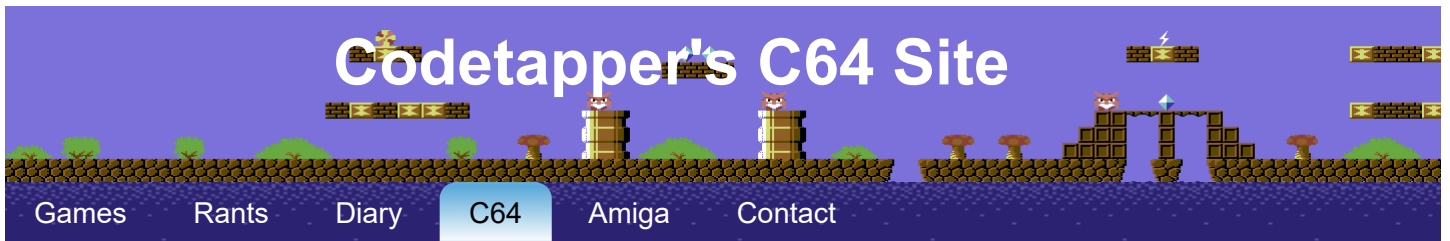
"Aaagh", Debbie wails from her office, "I've forgotten to order the side labels."

Gosh SHOCK HORROR!! Can the lack of side labels possibly hold up the release of *Paradroid*? Find out next month in Zzap! when we bring you not only the film of the diary but the REVIEW OF THE GAME!

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Zzap Paradroid Review

PARADROID

• Hewson consultants, £7.95 cassette, joystick only

Far, far into the future in a dim distant galaxy a fleet of Robo-Freighters were making their way to the Beta Ceti system when disaster struck. The ships ran into an uncharted field of asteroids and were bombarded by powerful radionic beams. While these rays didn't actually affect the ships In any way, the robots, and consequently the human crew members, weren't quite so lucky. It later arose that the robots' circuitry became scrambled whilst travelling through this field, rendering them hyperactive. This resulted in every living crew member in the fleet being eradicated by the now psychotic robots.

To make matters worse, eight of the ships were last seen breaking away and heading for enemy space. Should the Droids fall into enemy hands then they could be used against man to cause his ultimate downfall. The only way to prevent such a disaster from occurring is by destroying every last robot present on the renegade freighters.
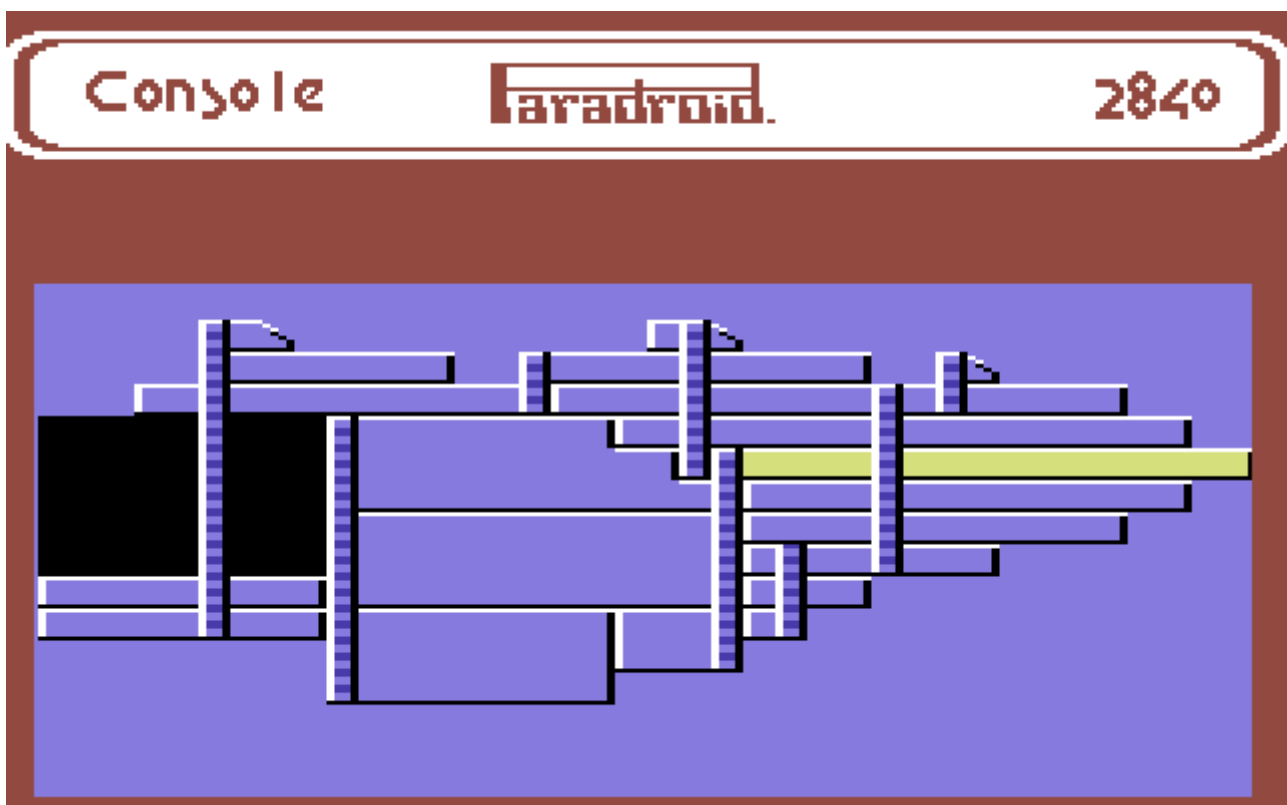
Side elevation of the space freighter 'Paradroid', showing the deck levels (the pale blue line indicates the level you currently occupy), and connecting lift shafts.

A prototype Droid, known as the **Influence Device**, has been placed under your command and since docking was out of the question, it was beamed aboard the first ship, the *Paradroid* (hence the title of the game). This Droid is a effectively little more than a self-sufficient helmet, possessing its own power supply and armament. It has the unique ability of being able to temporarily take full control of any robot, maintaining all the working functions of its new found host In the process. Naturally the host robot objects to this "intrusion" and attempts to resume its normal operation. This leads to the device 'burning out', so in order to survive for any great length of time one must change hosts regularly. To do this one has to gain control of the relevant robot's microcircuits. Failure to do so results in the destruction of your 'host' and ultimately yourself.

By centering the joystick and holding down the fire button you enter **Transfer Mode**. This enables you to interface with a Droid of your choice by ramming it, and initiates the transfer sequence. On merging with a robot you are reminded of the device you currently control and informed of the one you wish to take over. You are then presented with two sections of circuitry containing twelve wires from both yourself and the target Droid. One must select which side, and therefore colour, is going to be advantageous before a timer counts down from 99 to zero.
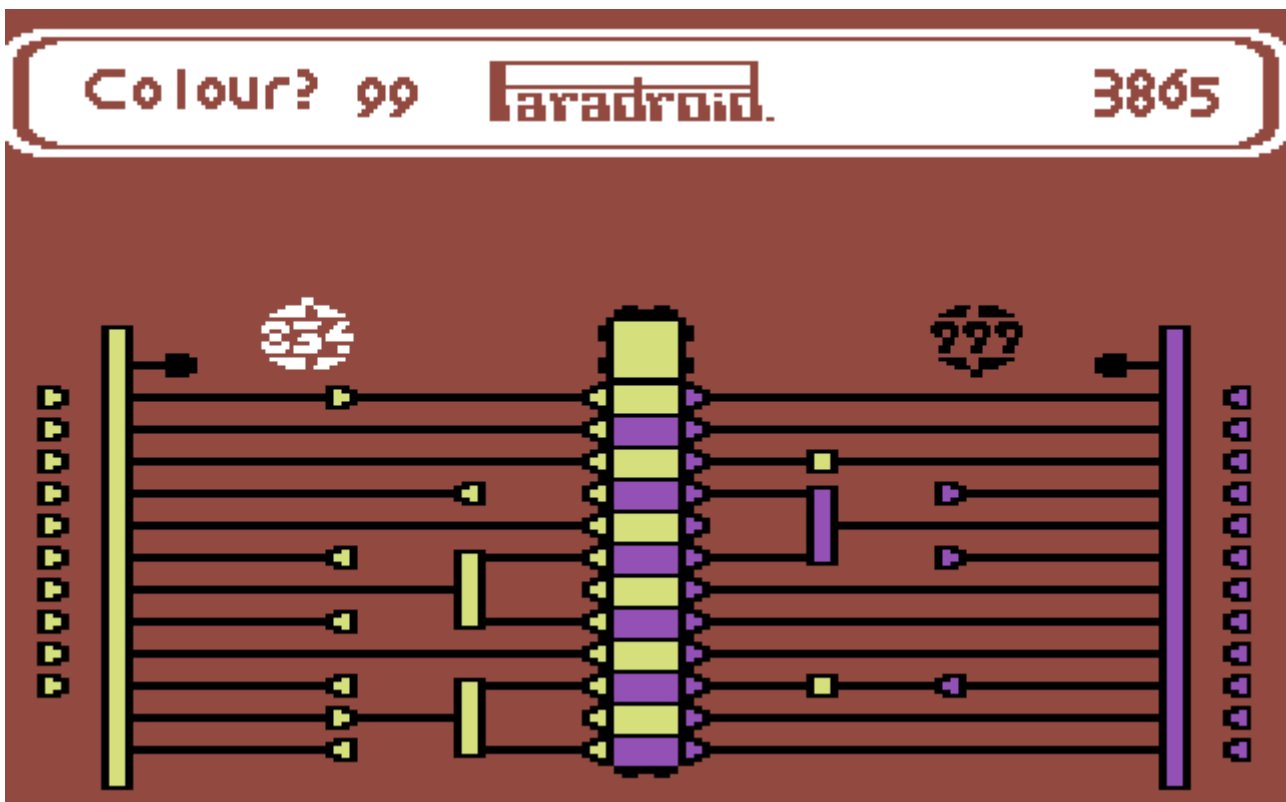

The Transference Game - the influence Device is attempting to take over a Class 9 Command Cyborg, but first he has to select his colour... the Pulsars are shown down the side.

Some of the wires lead to a central bar composed of twelve blocks in one of three ways, while others, known as **Terminators**, don't actually reach at all.

The object of the exercise is to set at least seven of the twelve blocks to your chosen colour within a given time limit of 99 units. This is done by strategically sending Pulses through the wires and Into the blocks, the quantity of which depends upon the class of robot in your possession. If neither Droid has the advantage at the end of a 'bout' then a Deadlock is called and the battle has to commence once more with different

circuits. There's more sophistication involved than suggested here, but the game instructions covers the process adequately.
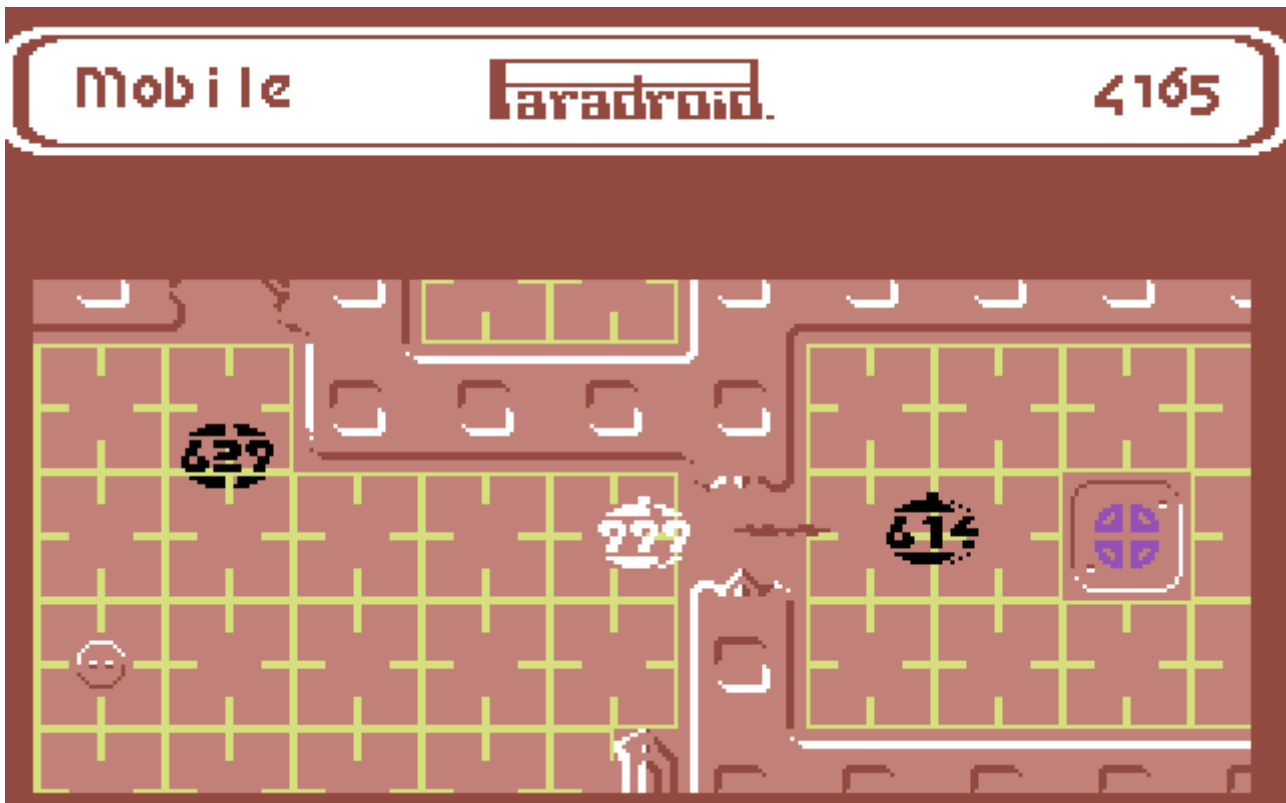
We're looking vertically down onto a section of a deck floor. The Influence Device is now in possession of a Class 9 Command Cyborg (seen centre of playing area).

Unfortunately, the Influence Device has some limited capabilities and it can only transmit details of its immediate surroundings back to your screen, ie anything within its own visual range. A large majority of the decks are larger than a single screen, so each is viewed through a multi-directional scrolling window. One critical defect of the optical sensors used in the Influence Device is that it can't see around corners, obstacles or through walls. This gives rise to what can best be described as a sort of three dimensional view in two dimensions.

There are several different deck layouts, most consisting of many smaller rooms with sliding doors that open when a Droid is in close proximity to them. Some sections are nothing more than a single location while others, such as the cargo bays, contain wide open spaces leaving you vulnerable to attack. There are eight lift shafts and many access points spread throughout the ship, allowing you to freely travel from floor to floor.

By logging on to one of the many consoles about the ship one can access the Droid Data Library. This contains useful information on all of the robots, including details on physical attributes, such as height, weight etc and other relevant characteristics. You are restricted though, in that you can only view data on robots of a lower rank than yourself, due to the fact that access is determined by the host Droid's security clearance.

Droid Data Library. They sure are a mean looking bunch!

There are 24 different types of Droid, each with their own personality and these are divided into 9 classes: Disposal Robots, Servant Robots, Messenger Robots, Maintenance Robots, Crew Droids, Sentinel Droids, Battle Droids, Security Droids and the 999 Command Cyborg. The latter is the most powerful of all robots and can only be taken over for a very short period of time. There is only ever one Command Cyborg per freighter. The robots are represented on screen as a three digit number, the first showing the class of Droid and the other two merely indicating rank.

While accessing the console it is also possible to view a plan of the deck you are currently inhabiting or a side elevation of the ship. The former shows all elevators, consoles and energisers present on the deck while the latter is a simple representation of all decks and the lift shafts adjoining them.
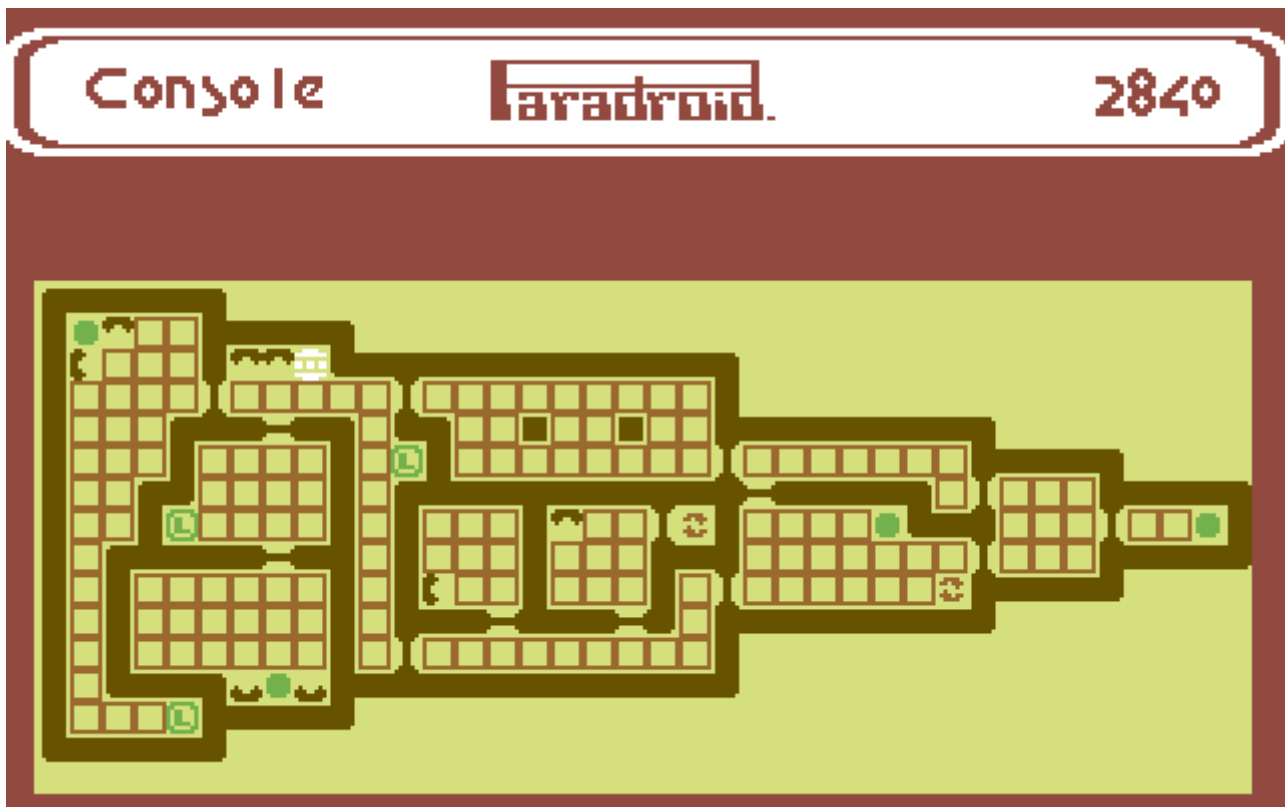
A plan view of a deck, showing lift access points, consoles and energisers.

Droids can be destroyed in one of three ways: by ramming, shooting or transferring. The first method is only really viable if you are in possession of a well armoured Droid, since you can be considerably weakened on ramming. Shooting is the quickest and easiest way of disposing of a Droid, higher ranks requiring many hits for complete destruction. Some Droids fire back so the utmost caution should be exercised when attacking one in this manner. Finally, the last approach, transferring, gives rise to a game of its own as previously mentioned. If you eliminate several Droids in a short period of time the alert status rise and then you can score more for each 'kill'.

On completely clearing a deck of all Droid activity the lighting system shuts down, plunging the entire floor into semi-darkness, and you receive a small bonus. When you finally clear all twenty sections of the ship you are given a hefty bonus, a congratulatory message and you are beamed aboard the next freighter. Finish all eight freighters and... Well, any offers?

This has to be the best combination of shoot em up and strategy in a game that I have seen to date. Even if you put aside the excellent graphics and impressive sound the gameplay elements are astounding. When you first start to play, the immediate reaction is to clear as many decks as possible, ie wipe out the little droids and then move on to the harder decks. Soon you realise that this isn't quite the best way of achieving the awesome task of clearing all twenty decks.

I found that trying to blast away the higher droids meant getting zapped back into a 001 influence device often, making it very hard to find anything to take over since I'd wiped out all the easier influenced droids earlier on. This happened quite frequently so now I've found that the best strategy to adopt is to clear as many of the more difficult decks as possible, then come back for the easier ones.

The overall ship design amazingly well thought out with cargo decks and shuttle bays. Every class of robot having its own personality and movement pattern adds a great deal of atmosphere to the game.

When *Paradroid* finally arrived in the office I wondered if it would be as good as *Gribbly's* and whether after three months of build up the game would be a flop. I needn't have worried - it's absolutely superb!

The first thing that strikes you are the stunning graphics. These are tremendously effective and give the game a fantastic spaceship atmosphere, working perfectly in tandem with the wonderful sound effects. These too, add to the general feeling of exploring a hostile future space environment (listen to the robot conversation on the title screen too).

The gameplay is marvellous, with a nice 'feel' as you zoom around the ship, especially when you become an 'eight' class robot. The transfer game is great fun to play on its own and there can be some rather tense moments (especially when you try to no from 001 to 883)! The really good thing about the transfer game is that with practice you can make really huge jumps in robot classes once you have become proficient.

Overall *Paradroid* is one of the best programs I've seen on the 64, and is one that has been keeping my interest for several weeks, something that a game hasn't done for some time. The challenge of clearing all eight ships is immense, end even if you do solve it there's always the possibility of bettering your score to keep you going back to it.

There have been several new approaches to a shoot am up before, but none have been quite so stunning as Hewson's *Paradroid*. The very first time I loaded the program I was overawed by the amazing presentation and the scrutinous attention to detail that the programmer, Andrew Braybrook, must have gone to such lengths to achieve. Such subtleties as not being able to 'see' around corners and pillars in plain view and the ability to call up information on the different classes of robot make *Paradroid* the best presented game I have **ever** seen. The use of the humble joystick is just as impressive - the several functions available being accessible with startling ease and little or no confusion.

Although the scrolling window technique used in *Paradroid* is similar to that of Andrew's previous game, *Gribbly's Day Out*, it is in fact better. It's just so fast and smooth, with no noticeable screen glitch at all... Marvellous! The graphics are of the same quality as the presentation with brilliant and effective use of the bas-relief technique, giving an excellent metallic and atmospheric look to the ships. The robots are just as well defined as the 'scenery' and the use of colour Is exceptional all round. Each robot has been so well designed and implemented that they really do have individual character.

For a game of such complexity, *Paradroid* is 'friendly' and easy to get into. The inlay instructions are concise but comprehensive and the information contained within the program complements them perfectly. In this game the blend of strategy and arcade action is quite unique. *Gribbly's* was great but *Paradroid*... For once words fail me!

Presentation 100%
Immaculate. Faultless in appearance and execution with excellent use of joystick.

Graphics 97%
Stunning bas-relief effect. Brilliant definition and use of colour all round.

Sound 86%
No music, but incredibly effective and atmospheric beeps, whoops and the like to compensate.

Hookability 98%
Virtually enforced addiction as you attempt to clear the first ship...

Lastability 98%
... and once you've cleared that there are still seven more to go!

Value for Money 98%
It's been worth the wait and it's definitely worth the money.

Overall 97%
THE classic shoot em up.

Series Links

Part 1 / Part 2 / Part 3 / Part 4 / **Review**