WORK IN PROGRESS

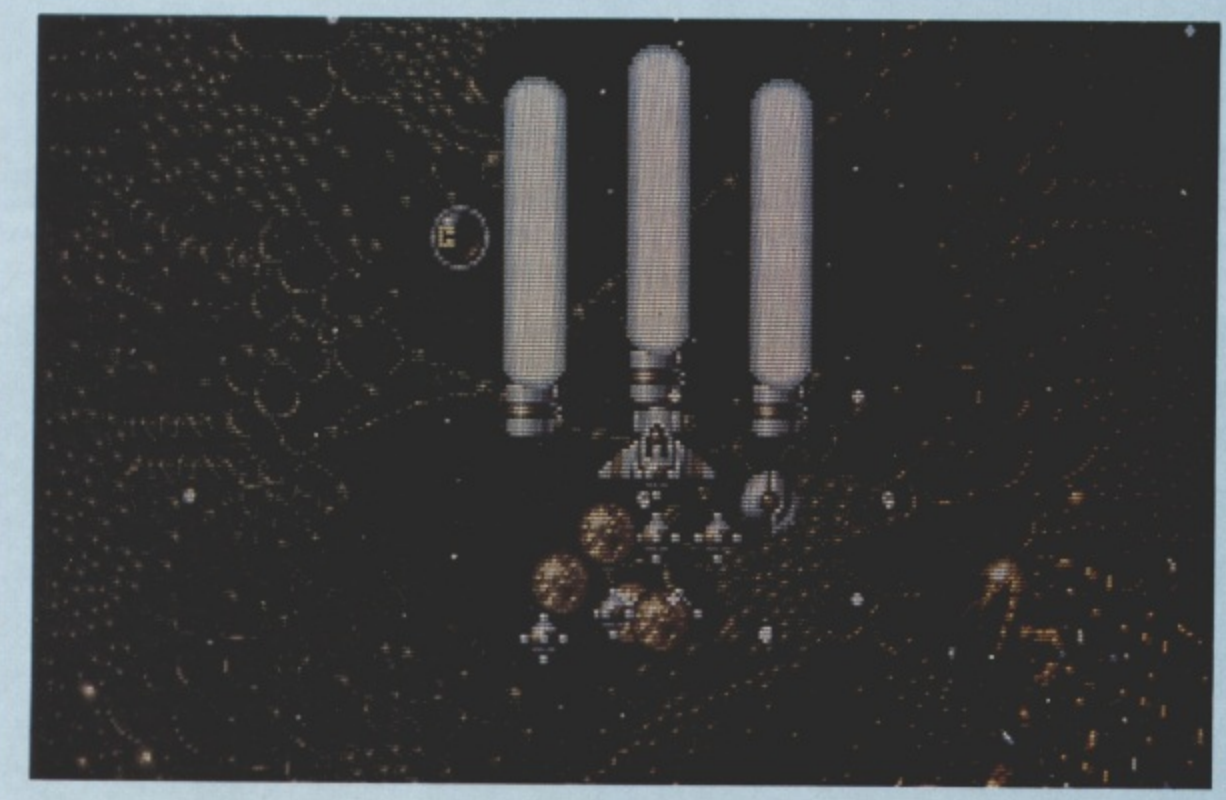
XENON II

The two previous Work In Progress features have shown the involved process of converting a coin-op. There's another side to the coin though . . . original games, where the design is a complete project in itself. Gary Penn has a look at the Bitmap Brothers' latest.

ST programmer Stephen Kelly, currently working on something big we can't talk about just yet.

Amiga, PC and now ST programmer Mike Montgomery, busy tinkering with utilities to aid development before he ploughs into Bros' next.

Front man and ideas machine Eric Matthews, beavering away on a progress report for Xenon II.



The screen is almost alive with bomb-spewing aliens – surely this is the point of no return . . . then, out of the blue, a single press of the fire button unleashes dozens of bullets in every conceivable direction. Explosions abound, but yet more aliens advance – and surprisingly the action doesn't slow down.

There's so much going on that it's hard to believe that anything more could happen. But it does. And all Bitmap's frontman Eric Matthews can do is laugh and say "Wait till you see the heavy artillery." He is joking of course.

Isn't he?

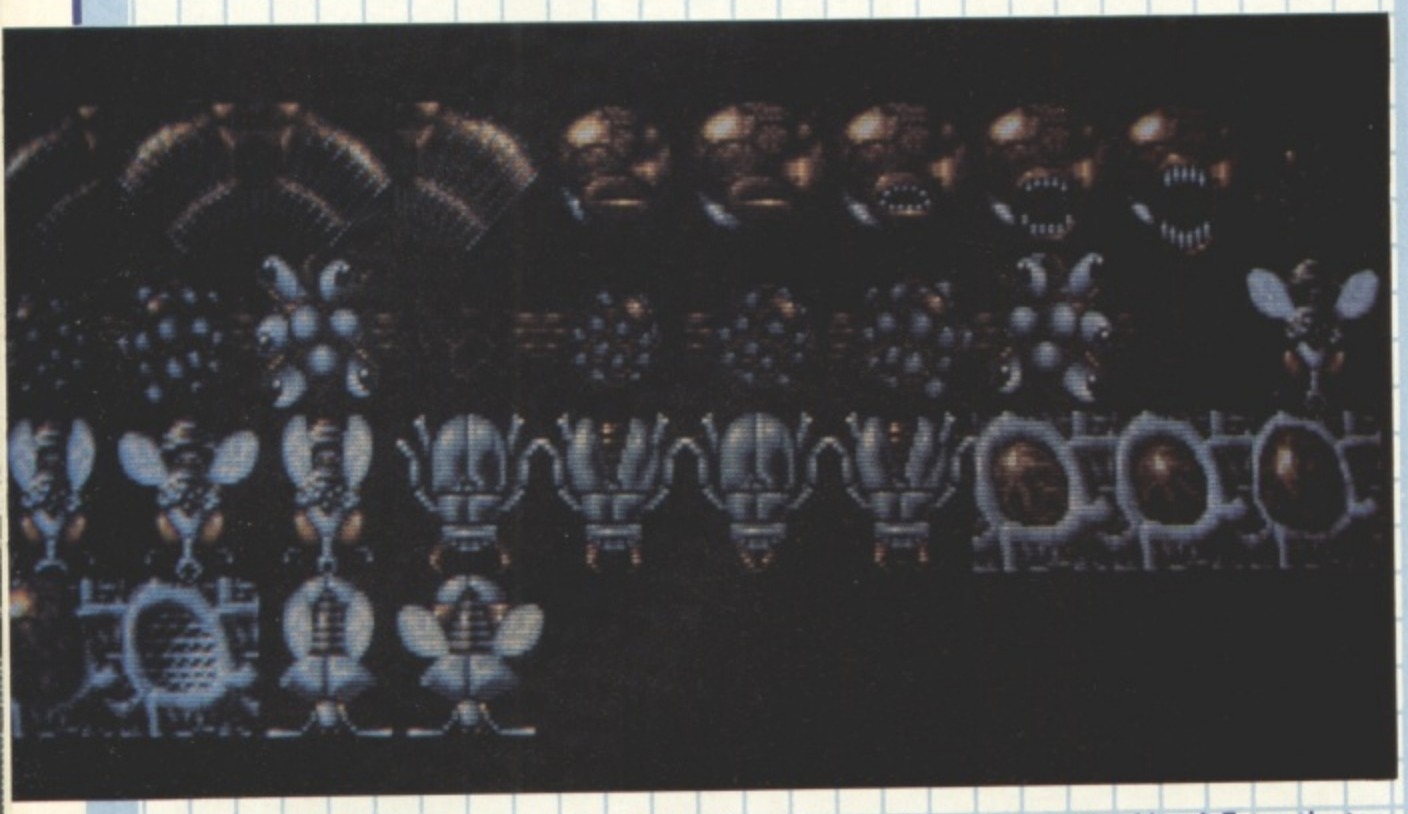
Just when you thought shoot 'em ups had reached an all-time destructive peak, The Bitmap Brothers decided to produce the definitive blaster . . . again.

"Everyone seems to be into destruction and extra weapons in a big way," reckons Eric, "we wanted to satisfy this demand with **Xenon II** . . .

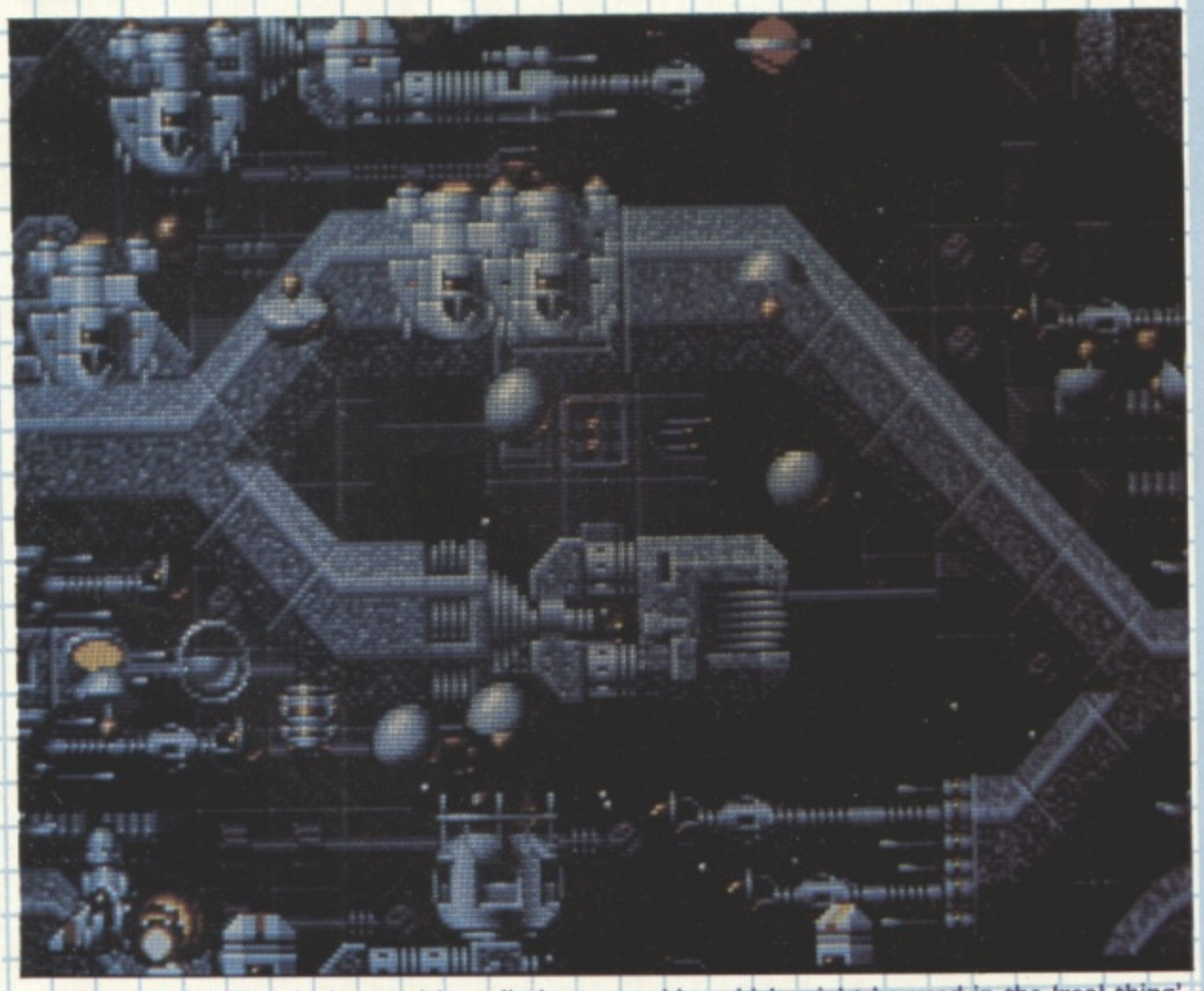
"We're trying to get away from the standard formula, where alien space ships fly down the screen in predictable, predetermined patterns and you have to shoot them all down before meeting the big alien at the end of the level. That sort of thing.

"Basically we've drawn inspiration from other shoot 'em ups – all the best bits – throwing them together and adding plenty of innovations of our own. You only have to look at **Scramble, Nemesis** and **R-Type** to see that it's what the coin-op people have been doing for years."

Armed with three items of what Bros describe as the basic weaponry: three cannons which resemble rocket thrusters (and behave like it), a multiple which is capable of unleashing up to 36 shots in 12 directions, and a string of mines to litter the screen. The effect is devastating, which makes you wonder how on earth Bros are going to make the more powerful weapons more powerful without weakening the lasting challenge. "We've got dozens of weapons planned, most of them never seen before and most of them we'll implement."



Some of the 32 x 32 pixel Degas-drawn sprites found on the second level. From the top: four frames of animation for the tubes attached to one of Level Two's big boys from which a couple of snakes emerge; five frames of a fairly standard beast followed by 10 frames for an exploding pod which releases small, leech-like creatures which home in on your ship; four frames each for two insects, five frames for a pulsating 'sac' which releases the toothy beast above, and two frames of a third insect.



The Signals demo with preliminary graphics which might be used in the 'real thing'. Having produced a skeletal framework, ideas are continually added, refined, compromised and occasionally cast aside. Originally the ship was able to transform between tank and fighter – as in Xenon, but the idea was dropped in favour of a more straightforward blast.

So what do Bros see as essential ingredients in a shoot 'em up?

"There's a great deal of 'oneupmanship' among gamesplayers – it's a race to see who can finish the latest games first – so you have to make sure there's something to provide a sense of achievement.

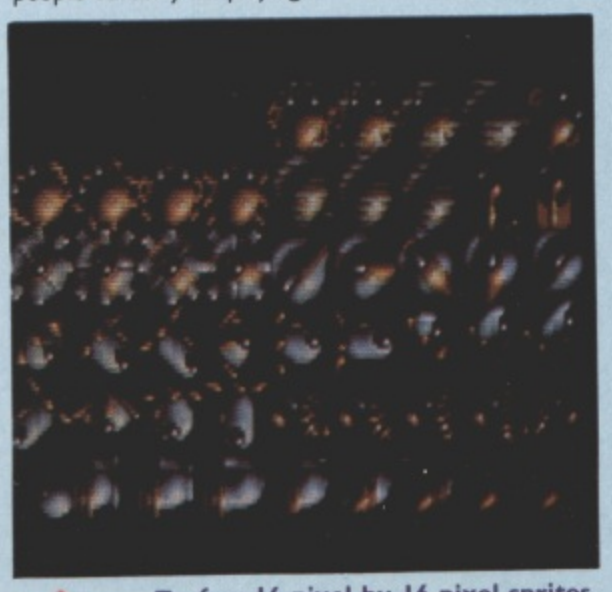
"There has to be lots happening, with aliens which do something other than move around the screen in a predictable pattern. They need some kind of character – so do the different sections. Different levels need more than different graphics – an individual feel.

"Plenty of firepower's important – a feeling of power. An element of mystery is also essential – you have to give the impression that there's more around the corner, a sense of discovery.

"It's like in this really ancient coin-op," Eric enthuses. "I forget the name, but it was a bit like **Invaders** with these knights attacking you. At the end of the level this big frog jumps on screen. Then totally out of the blue, lightning strikes it and it grows huge and starts bouncing around the screen.

"People underestimate the importance of style and attention to detail. You can't have reasonable graphics and then use the standard **Degas** fount for the high scores.

"Sustaining interest is the most difficult thing. You can't pack everything in the first level and expect people to carry on playing."



A few 16 pixel by 16 pixel sprites from Level Two.

THE SCENE IS SET

Where **Xenon's** shooting action was backed up by a long, extraneous scenario, this time around it's been replaced by a short, extraneous scenario. The Xenites have left time bombs through history and it's your job to defuse them before they explode and alter the very fabric of time itself.

Basically, this is an excuse for destruction on a grand scale through six distinctly different horizontally scrolling time zones. Each level represents a process of evolution – from the prehistoric flavour of the first to the last space-age bent of the last.

Credits are accumulated by destroying aliens and proving your worth. The cash is then used to buy weaponry from a shop. And just in case you miss a few aliens along the way, you can reverse scroll the screen and clear up any loose ends.

GRAPHICS

Anyone who criticised the boys for their use of bas-relief (metallic) graphics for their first two games is in for a big surprise . . . **Xenon II** is a radical departure.

Newcomer Mark Coleman is responsible for how the game looks – although not necessarily conceptually: "Eric provides a basic brief for each level and leaves me to do the rest. Well, apart from reams of inspirational pictures he throws my way . . ."

Mark's work is executed on **Degas Elite** on the ST with a few extra features courtesy of Bros – like the facility to overlay animated sprites on background. He doesn't use pen and paper, preferring to sketch out on screen beforehand.

Apart from admiring the work of Richard Corben (creator of Den – as seen in **Heavy Metal** magazine), Mark has been into graphics for the last 13 years, and computer graphic design for the last eight, progressing from an Atari 400 through to an ST when the 1040 first appeared.

Mark's first project was **Speedball,** which took around six months – on and off. It may be of interest to learn that there are over 100 frames of animation on the players alone!

The level maps are put together with a special utility written by Bros, and constructed with 'building blocks' (those from Level Two are shown here – see if you can spot respective the pieces in the other shots).

SOUND

Xenon II's music is probably the most important aspect, as the subtitle – **Megablast** – comes from the title of the throbbing soundtrack which accompanies the action – a rendition of a track from the Bomb The Bass album **Into The Dragon.**

The boys were itching to produce a sequel to last year's smash hit **Xenon,** and they were equally keen to produce a shoot 'em up featuring **Megablast** (Hip Hop On Precinct 13).

"It's perfect music for a shoot 'em up," says Eric. "It's instrumental, which makes it relatively easy to reproduce on computer, and the title says it all . . ."

The boys got in touch with Martin Heath, big cheese of Bomb The Bass' record label Rhythm King. As fate would have it, Martin is into computer games in a big way, with a collection of over 500 games spanning from the VIC 20 days through to contemporary classics for the ST.

Understandably, Martin's response was favourable. A call to Tim Simonen (BTB's main man, who's also into computer games) made the possibility a reality.

The computer renditions of **Megablast** are being produced by David Whittaker (nephew of Singing Star Roger Whittaker). David's an industry veteran who writes music for everything from the Spectrum through to the PC plus associated add-on boards) and Apple Mac.

With hundreds of tunes to his credit, his 16-bit portfolio includes **Xenon, Speedball, Obliterator, Cosmic Pirate, Archipelagos,** and soon to be released **Dogs Of War, Iron Lord, Real Ghostbusters, OutRun Europa, Skateball, Weird Dreams** and **Aquaventura.**

Having played in groups since the age of 16, Dave's dabble in binary music began in 1982 on Commodore's VIC 20. He wrote a game on the 64 called **Lazy Jones** for Terminal, but found more demand for his music than programs so moved into music side of things.

"I use a Korg M1 music workstation linked via MIDI to the Pro 24 Sequencer which stores all the tracks/voices. The piece is then typed into assembler."

Bomb The Bass' Tim Simonen also uses Pro 24 Sequencer (essentially a mini-studio which is used to tell the drums, synthesisers, etc when to play), which helps David when he reconstructs the track using Tim's original samples on the Amiga – possibly with the original speech: "It's a megablast!"

David describes his musical influences as "everything", electronic music in particular, especially Jarre and Jan 'Miami Vice' Hammer. He doesn't like house or hip hop or anything that uses an obvious drum machine.

On the side effects side, most of them come from a synth. "I tend to rehash old samples and remix them," David confesses. "For example, I used a car horn for the klaxon in Amiga **Speedball,** and with **Weird Dreams** there are some realistic burps and slurps.

"There's a greater demand for more interactive sound – the simple-film like pieces, like I did for **Fright Night.**"

David's currently knocking up some advertising jingles for television, although thankfully this doesn't mean ignoring the computer side of things completely. Well, not yet, anyway.

TECHNICALITIES

To see **Xenon II** in action is breathtaking. But the same can hardly be said for the past form of its programmer John Smith (that's right, this one's not actually written by Bros as such). His first release was the **Arkanoid**-alike **Impact** through Audiogenic, followed by **Helter Skelter** and more recently **Pipeline** through Entertainment International.

John's progressed from his PET beginnings to Atari 8-bit and more recently the ST, Amiga and PC. The reason for the lack of releases until recently? John explains this quite concisely: "I'd never finished anything."

Xenon II's three layers of parallax comprise two solid layers and a starfield, each with its own speed to create a feeling of depth.

At the moment it's running at 17 frames a second. It can handle a dozen 32 pixel x 32 pixel sprites or 30 or so 16 pixel x 16 pixel sprites – and then there's the weaponry to take into consideration (and that's plenty to consider!).

"The program can just about run at 25 frames, but it slows down when it gets really busy and this doesn't look good."

The ST version supports 50 and 60MHz modes, but will John make use of horizontal overscan on the Amiga for a full screen game? "I might do – I haven't really got to grips with the Amiga yet. But I will be using the Blitter to good effect so it might run a bit faster.

"I doubt if I'll be able to reproduce the three levels of parallax on the PC though. I've also yet to dabble with EGA – it's an unusual graphics mode."

John's writing his code on a 386 PC with his own assembler, which was written in conjunction with the **Carrier Command** programming team, Realtime, and the **Star Wars** boys, Vektor Grafix: "We weren't happy with **PDS** so we wrote our own development system," John admits.

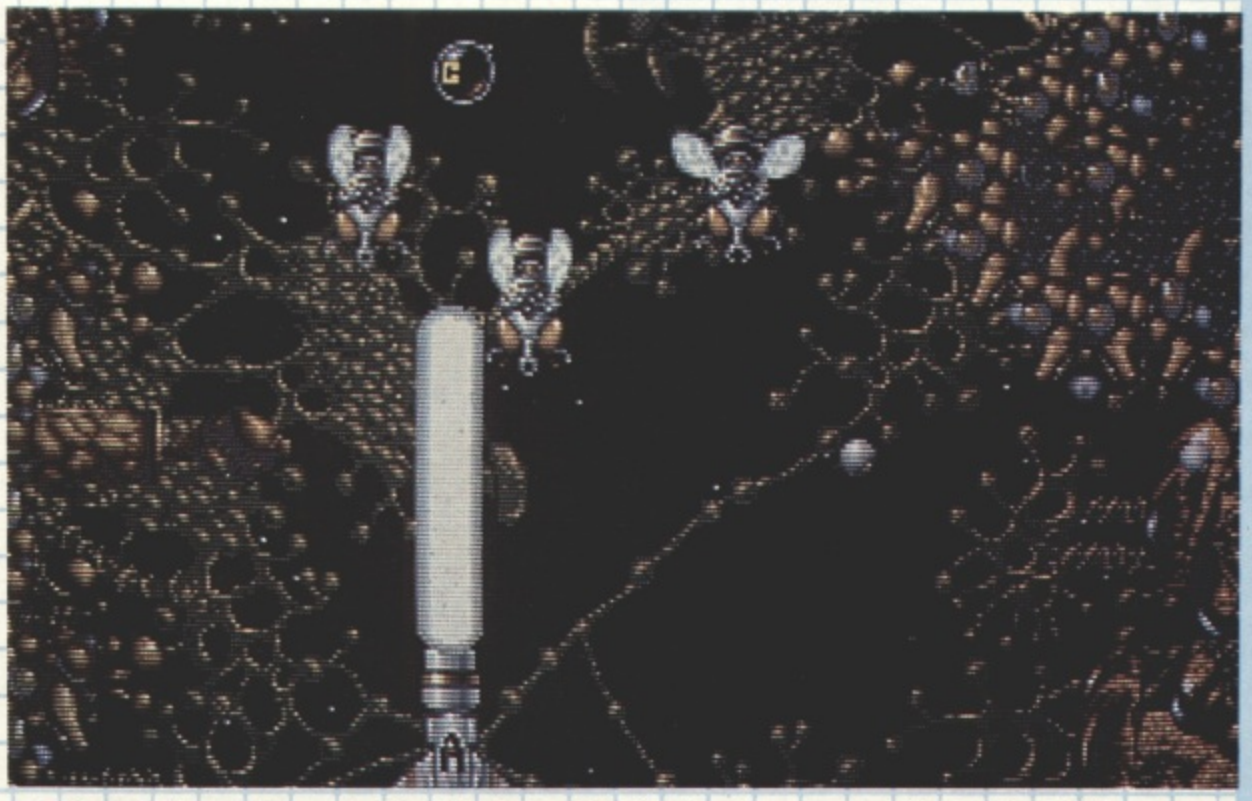
The code is transferred to the ST via a parallel interface.

"Most of the work's done in the last few months, and a lot of time's spent optimising routines. The first few months were spent figuring out technical restrictions. I started with the scrolling to see how fast it could go, then I put some sprites on top and adjusted the speed accordingly. Then the Bitmaps came up with a game specification."

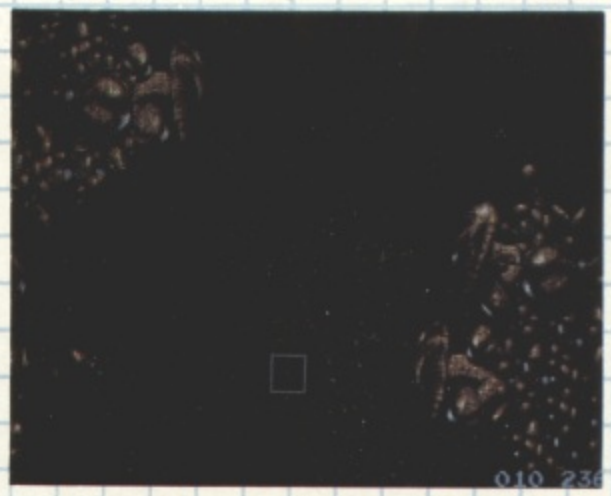
"If we can't do something, John calculates a compromise – the size of the sprites against the quantity and so on. It's all a play-off for time – to make the program run as fast as possible," Eric reveals.

John has little input into the design as such, although in providing compromises he also provides ideas. He's the first to admit he's not a game designer, and doesn't get the opportunity to play that many games. "I played a lot of **Boulderdash** and **Jumpman** when I was at University," he confesses.

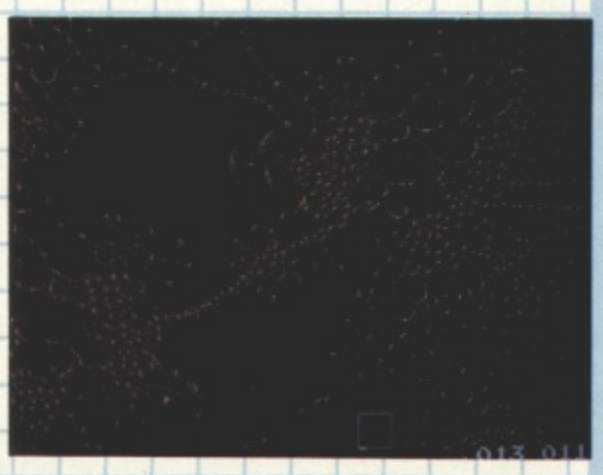
But does the man responsible for coding what it potentially the greatest shoot 'em up ever written actually like a good blast? "Oh yes, I'm a great fan of **Scramble** and **Vanguard.**"



Xenon II's parallax isn't just a pretty frill. The ship can move 'in' and 'out' of the screen, and this is essential on later levels. It's similar in effect to the rolls in 1942, although here the aliens follow you . . . Rather than store all the frames of animation for the ship and aliens as they shrink and enlarge, only the halfway sizes are drawn – the images in between are calculated.



The two levels of parallax are put together on separate screens. This is a section of the 16-colour foreground.



The four-colour middle-ground, which moves in front of and slightly faster than a four-colour starfield in the background.