

Daphne Oram

As a child in the 1930s, Oram dreamed of a way to turn drawn shapes into sound, and she dedicated her life to realising that goal. Her Oramics machine anticipated the synthesizer by more than a decade, and with it she produced a number of internationally-performed works for the cinema, concert hall and theatre.

Oram was one of the first British composers to produce electronic sound, a pioneer of what became "musique concrete" – music made with sounds recorded on tape, the ancestor of today's electronic music. She was born in 1925, was extremely bright, and studied music and electronics – unusual at the time not only because electronics was an exciting new industry, but also because it was a man's world.

She went on to join the BBC, and, while many of the corporation's male staff were away fighting in the second world war, she became a balancing engineer, mixing the sounds captured by microphones at classical music concerts. In those days, nearly all programmes went out live because recording was extremely cumbersome and expensive. Tape hadn't been invented, and cheap computers were half a century away.

Yet when tape did come along, in the early 1950s, Oram was quick to realise that it could be used not simply for recording existing sounds, but for composing a new kind of music. Not the music of instruments, notes and tunes, but the music of ordinary, everyday sound.

After Oram had finished her day's work, and everyone had gone home, she trundled tape recorders the size of industrial gas cookers from empty studios, and gathered them to experiment late into the night. She recorded sounds on to tape, and then cut, spliced and looped them; slowed them down, sped them up, played them backwards. It must have been like working in a laboratory, or inventing new colours – a new world almost impossible to imagine now.

Unfortunately – perhaps inevitably – nobody at the BBC was interested. Still Oram kept going. She badgered senior figures to set up a department producing experimental sound works, only to be told that the BBC had several orchestras capable of producing all the sounds that were needed.

Eventually, however, a committee looking into "Electro-Phonic Effects" was set up, and Oram shared the results of her experiments. But still they didn't want her to be involved. "They wanted my work," she later said, "but they didn't want me." So she teamed up with another recording engineer, Desmond Briscoe, and in 1958, 16 years after Oram first joined the BBC, the pair were given a spare room in the Maida Vale studios, along with some out-of-date equipment, and left alone to get on with it. To

avoid complications with the orchestras, the Musicians' Union and the BBC music departments, they had to avoid the word "music" entirely, so they called the project something else. The BBC Radiophonic Workshop was born.

Within a few months of founding one of the most famous music studios in the world, however, Oram left. There was a clash of ambitions. She wanted to develop an experimental institution, like those in Paris, Cologne and Milan, producing electro-acoustic music by international avant-garde composers of the day. The BBC, yet again, had other ideas: it wanted a sound-effects factory producing jingles for schools programmes and radio drama.

So Oram set up on her own in a deserted oast house in Kent. Here she built an astonishing contraption, the "Oramics" machine, which produced pure electronic sound. It was about the size of a chest of drawers and was constructed from metal shelving materials. Electric motors pulled eight parallel tracks of clear 35mm film stock across scanners that operated like TV sets in reverse. On the film she drew curving black lines, squiggles and dots, all converted into sound. It looked and sounded strikingly modern.