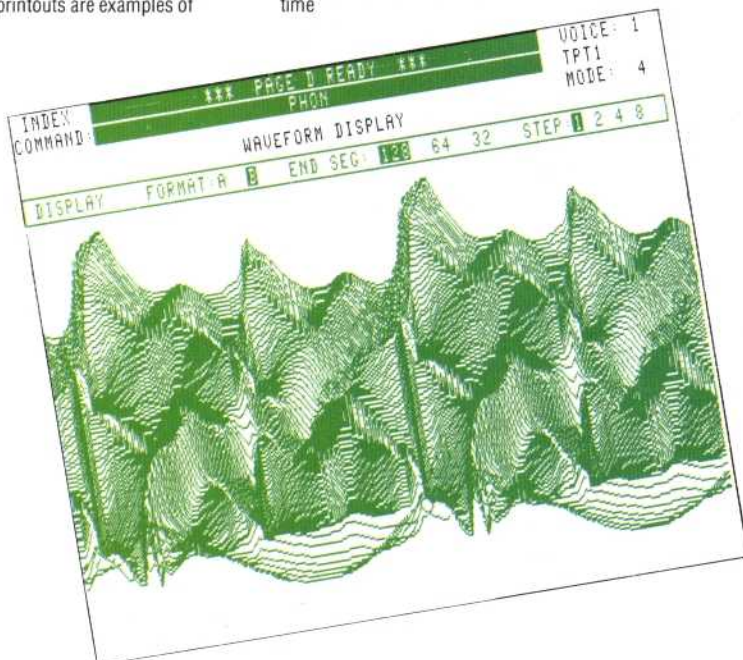


Fairlight Fare

These waveform displays were created and printed on a Fairlight CMI music system. The first is an example of a sine wave pattern generated by the Fairlight using FM synthesis (page 561). This sound was fabricated by mixing waveforms electronically. The other printouts are examples of

sampled sound. These waveforms are produced by digitising the actual sounds of a human voice, in the second instance, and a trumpet in the third. The displays are 'three dimensional', or topographical, representing the changes in the composition of each sound over time



unit to add echo or 'reverb', and rockabilly guitarists and dub reggae producers have depended on this type of treatment to give their music its particular sound.

The Quantec is a digital unit that, instead of merely providing reverberation, simulates the types of reverberation that occur in rooms and spaces of different sizes. Its smallest 'acoustic space' is a box with a volume of one cubic metre, and the preset simulations include sizes typical of living rooms, auditoriums, aircraft hangars and cathedrals. The Quantec's most interesting feature is the facility it offers to prolong the reverberation well beyond natural acoustic or physical limits. So, if a sound occurs in the cathedral-size simulation, and the reverberation time is maximised, the whole event will last several minutes — the effect is like listening to an echo provided by 10 Grand Canyons linked together!

It is said that, in the American Midwest in the 1950s, there was a small rockabilly studio that was built near a grain silo. It was this huge space that provided the studio with its classic echo-filled rockabilly sound. The modern use of digital units such as the Quantec is more mundane, being confined mainly to the post-production stages of television and film work. Actors can be filmed talking in the acoustically 'dead' environment of a studio, and the soundtrack can be treated afterwards to provide an acoustic resonance that suits the space in which the action is meant to occur.

'HUMAN' VALUES

Many people, musicians and non-musicians alike, feel that digital technology applied to music has a deleterious effect. They argue that this music is created and performed in such an artificial manner that the real 'human' values of spontaneity and expressiveness are being left behind in the rush to acquire greater degrees of technical control. This is a persuasive argument, but it is worth considering a visual medium — the cinema — to judge if this is really the case.

For several decades, cinema technology has allowed directors to shoot scenes from any angle, zoom in on detail and pan across large areas. It has been possible to repeat sequences of images, slow them down, speed them up, run them backwards, and edit film so that the most unlikely visual juxtapositions can occur within a split-second. It is only recently, with digital technology, that music-makers have begun to exercise comparable control over sound. Most people would accept cinema as an expressive medium, so it is likely that digital music will eventually be regarded in the same light. At present, it is easy for some musicians to be over-awed by the possibilities, and for others to produce music that has little more than digital novelty value. For those musicians prepared to meet the challenge of electronic music, the 1980s should be an exciting and demanding decade.