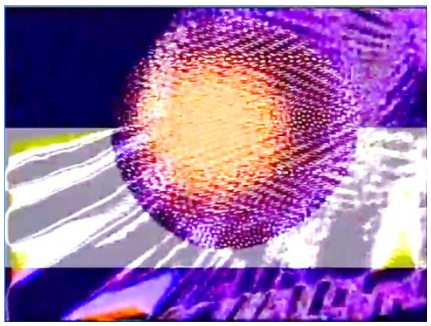
THE SECRETS & COMPLEXITIES OF THE SPECTRON

FEEDBACK EFFECTS

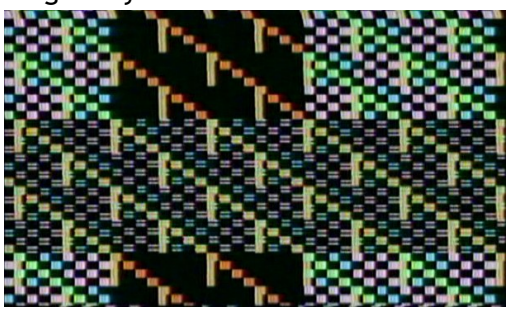
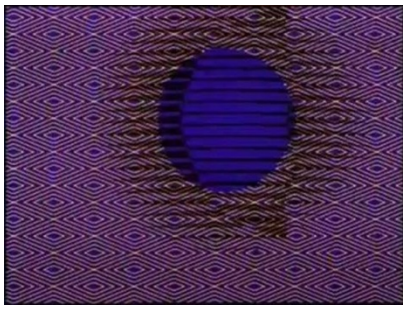
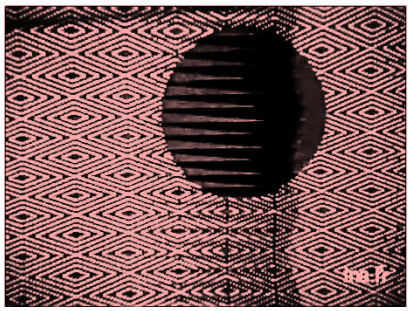
Surreal effects can be produced by incorporating optical video feedback into the signal chain, and using the extensive image processing capability of the Spectron to produce all kinds of inverted colourisation effects, negative imagery, and effects that can “shimmer” or “vibrate” on the screen. Here, the Spectron is used as a kind of colourisation vision mixer.





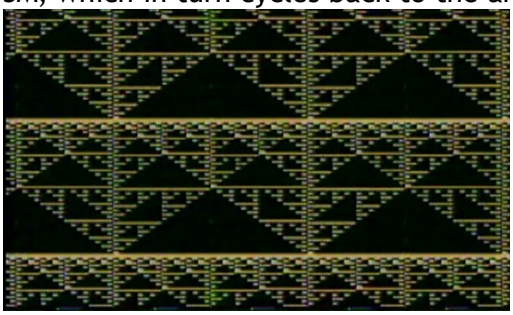
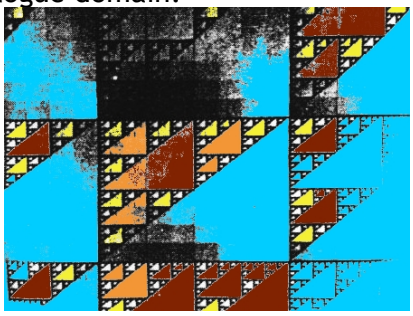
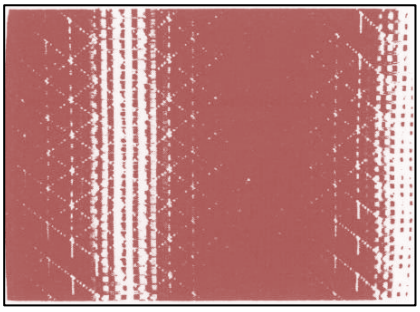

COUNTER ADDITION EFFECTS

Sets of pins in the same “column” on the patch board do a wired OR function. If you OR a series of X counter outputs one obtains thin vertical lines. If one then performs an XOR to the INVERT input of each X counter bit with the appropriate Y counter, one effectively makes a kind of digital adder, and the vertical lines can be turned into diagonal lines. Experimentation can yield diamond patterns and other variations of diagonally-formed combinations.

FRACTALS

Quite complex “fractal-like” patterns can be produced by integrating generators and processors with an internal feedback loop. Feedback can be created by the ACM controlling a shape generated and fed into the DSM, which in turn cycles back to the analogue domain.

THE UNEXPLAINED

One of the mysteries of the counter logic combinations is the “maze patch” from the Labyrinthe Fluides video by Genevieve Calame & Jacques Guyonnet. The “digital adder” technique is used here with the X and Y counters in a particular combination that has not been explained. All that is known is that many, if not all, logic combinations of a set of binary bits can be made by asymmetric functions such as AND and OR, and inversion symmetrical controlled inversion , ie. XOR.