

Little Spiders (1981)
Directions for performance

A microcomputer is used to examine the interaction and gestural styles of two keyboard players, and produces music based on each individual's actions and the coincidences that occur between the performers. Lights above the keys of each instrument indicate the finger patterns of the other player, allowing the performers to move from accidental coordination to intentional manipulation of the computer.

Each keyboard has two banks of keys: the upper tier of eight is used to select amongst the eight possible digital mixes of two computer generated voices. An LED above each key on each player's instrument lights up when the other player is pressing the equivalent key on her/his keyboard. A particular mix is heard only when both performers' choices coincide. The numeric value ("byte") represented by these keys is loaded into a "tracking range register" in the computer program when key 1 of the lower tier of four keys is pressed. Playing key 2 of this tier lowers the pitch of a voice, while keys 3 and 4 trigger changes in its timbre.

The performance is divided into seven sections. Both performers play the same part, so their instructions are the same.

1-- Play the timbre change keys (3 and 4). Begin slowly, striking a key perhaps once every five seconds. Each change of timbre will seem to coarsen the sound, and often to lower its pitch. As the timbres become more complex the audible change at each keystroke will appear less dramatic. Accelerate slowly over a period of one to two minutes.

2-- The section change is signalled by the computer shifting to the next set of mixes (a very distinct change in timbre). The sound will seem lower in pitch and denser in tone. Pause five to ten seconds after the change, then play as in the first section, but begin slightly faster -- about one key per two seconds. Toward the end of this section silences will appear between changes of timbre as a result of the complex waveforms and low frequencies. This will become increasingly noticeable in the following two sections. At these times, hit the keys as quickly as possible, so that there is never too drastic a break in the texture of the piece.

3-- The section change is audible in the same way as before. Again pause five to ten seconds, and again play as in section one, but still faster, at a key per second.

4-- When the section change is heard begin playing immediately and as fast as possible. There may be a fairly long silence at the end of this section, but continue playing willy-nilly.

5-- Section change signalled as above. A return to the timbre of section one: a high and cleaner tone. Slow back down to the tempo of section one, but alternate playing timbre changes and lowering the pitch of voices (key 2). Allow voices to go in and out of unison as they descend in pitch.

6-- Section change signalled by shift of previously "stable" voices to "tracking" mode - a noisy, glissing sound. Each performer will enter the tracking mode alone, as a result of individual key choices. The performers should wait until they are both in this "whoop-whoop" section to continue. They then select three to five different tracking ranges by pressing key 1 while holding keys on the upper bank. This action defines the pitch range in which the voices gliss and loop. By combining two different ranges at once the players can cause complex patterns and phrases to arise within the "tracking". Each performer determines the limits for his or her own voice. Alternate this action between two performers. By continuing to toggle the timbre change keys, the players end the tracking and resume the steady, holding voices.

7-- When both are holding, begin to play the upper keyboards. The performers should move in and out of unison action, seeking coincidences that change the mixes and toggle on and off the other sources (radio, tape). Follow lights indicating other players' actions, if necessary. As always, make musical decisions about which phrases, timbres, repetitions should be allowed to continue, to "play themselves out", and which should be cut short. Listen carefully to the flow and pacing of the piece and determine when fast, abrupt, unison action is appropriate, and when slower more gradual changes are in order. Continue timbre and pitch transformations throughout. Occasionally it may be appropriate to stop playing altogether and "hold" particular musical incidents. The computer automatically ends the piece after three small but discernable automatic mix changes within this rather chaotic section, which should make up approximately half of the total duration of the performance.

A recording of this piece can be heard on Going Out With Slow Smoke (Nicolas Collins & Ron Kuivila, Lovely Music VR1701).