

"Program 4, Pump On ... Go"

for cello and computer user

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Description:

"Program 4, Pump On ... Go" is a piece in the form of a computer game. It consists of a computer terminal for the "accompanist" with a second, duplicate screen that the cellist views to keep track of the pitches already played.

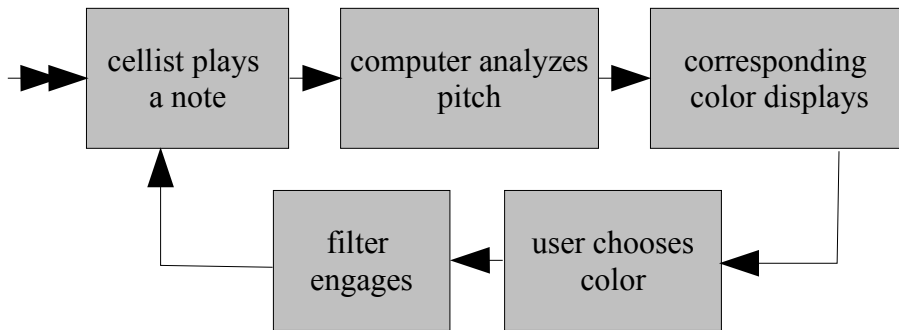
The four octave range of the cello has been split into eighty parts. A color spectrum has also been split into eighty parts. Each of the pitches is represented by one of these colors in a linear fashion. The second and third sections of the screen show the relationship of colors to pitches. The pitches are arranged from low to high, left to right across the screen.

The cellist improvises a series of small phrases throughout the piece. As the cello plays, the computer analyzes the incoming pitches and displays the equivalent color in a box at the top of the screen. It is the job of the computer user to watch how the colors change and, for each phrase, choose one of the colors that is displayed. The user then chooses that color from the spectrum in the center of the screen by clicking the corresponding box. This will in turn activate a band-pass filter with a center frequency equal to the color chosen. The computer user should try to accurately match the color but discrepancies between the pitch played and the color chosen are inevitable and are intrinsic to the piece.

The activation of the filter is displayed in the green bottom third of the screen. The cellist should not use a pitch again once it has been chosen; even if (s)he does the user will not be able to choose the matching color again. The filters affect a soundfile playing in the background passing small frequency bands with each selection the user makes.

This same process repeats throughout, slowly revealing the underlying sound.

Block diagram of process



Rules of the Game:

1. Listen, watch and react to the choices of your fellow performer.
2. Cellist should play short, 1-7 note phrases with pauses between. Take the time to see what the user has chosen and how that affected the sound. Use the entire range of your fingerboard. Ignore equal temperament. Avoid harmonics.
3. Cellist must try not to play a pitch once it has been chosen by the user.
4. If you make a mistake keep going, it's all part of the experience.
5. The computer user should choose as many colors per phrase as (s)he believe (s)he can identify accurately. (S)he need not choose a color for every phase.
6. The piece ends when the sound file finishes. If the two players are not finished, stop. If you finish early, sit back and listen.

The recording featured in the piece is a field recording of the main fountain at California Plaza at 350 S. Grand Avenue in Los Angeles, California