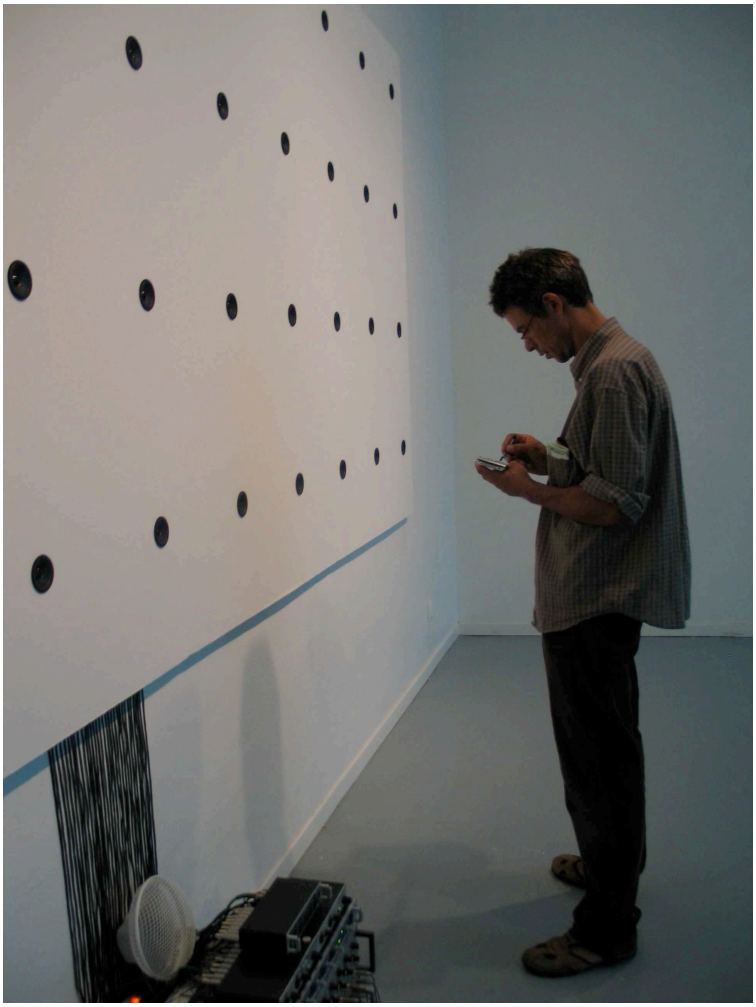


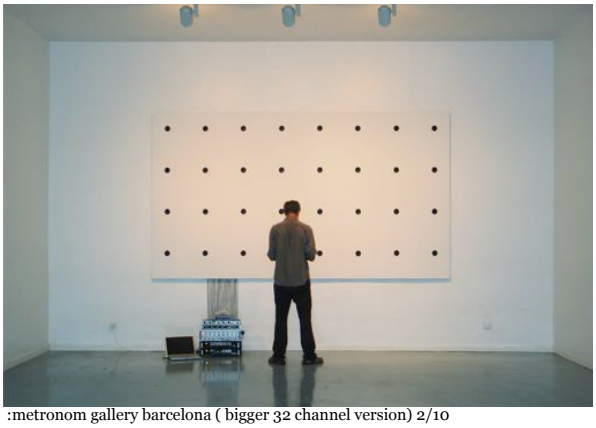
16:9

an
intercreative
soundinstallation

:the idea

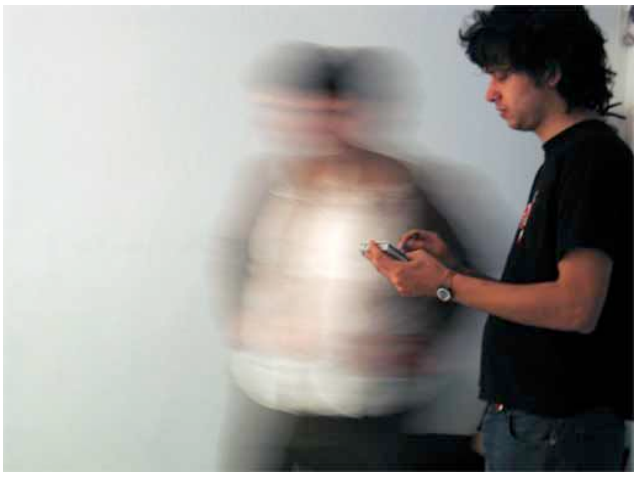
„16:9“ is an intercreative sound installation for closed and private spaces. via a portable and easy to use interface sounds can be mixed and freely spatialized like by a painter on a speaker canvas of several square meters size.
the up to 144 independent speakers are installed as a pattern in a big white screen. adapted to the space architecture the speaker matrix is designed to be fixed on a wall like a painting.
the huge number of speakers and the size of the canvas offers to reproduce an audio image with great depth effects and various options on placing and spatializing sounds.

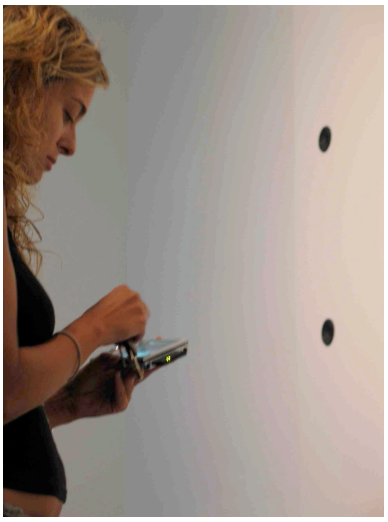
:prototype 32 channel in a apartmentt 1/10


:metronom gallery barcelona (bigger 32 channel version) 2/10

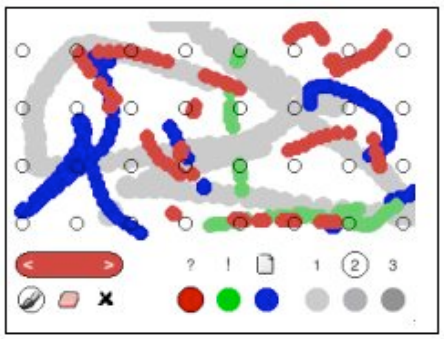
:the interface

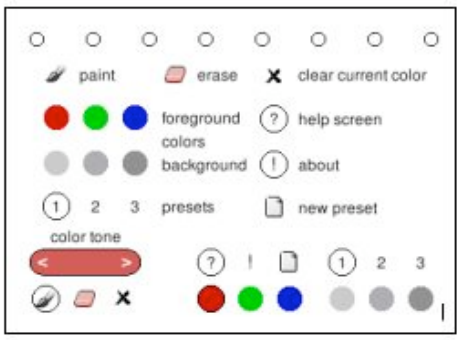
the interface, a wireless pda with touchscreen will be embedded in a painter palette. it runs an especially developed software called “p-client”. the “p-client” is the "non-acoustical" interface between »**16:9**« and the virtual painter. it is a piece of software implementing a graphical user interface, a kind of paint program, featuring various options to control and manipulate the audio image.





with help of a pen the visitor is able to paint a picture on the interface screen. up to three different primitive colors (red green blue) and three background colors (grey tones) can be chosen. each of these colors corresponds to a given sound texture whose sonic quality can be changed/controlled by the visitor.
colors painted on the interface screen will appear as sound at the same location on the speaker canvas. additional features enable to erase or store finished audio paintings or single colors.



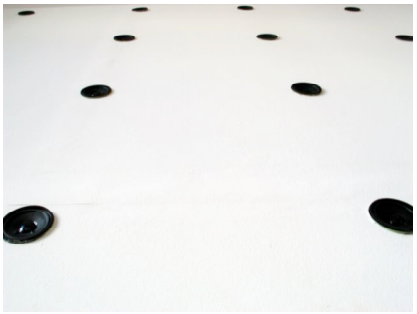


:the composition

in **16:9** sounds with an urban origin are used to produce the different sound/color textures in realtime. while exploring the city in which the installation is shown the composer seeks for characteristic and unique sounds that are typical for this urban space. out of taken recordings the composer creates the sound/colors that are later the base for an creative urban virtual painting. the visitor of the installation will be faced with sounds from the city he is living in which he might even recognize as familiar. by changing the character of these sounds or colors in several degrees of abstraction it is possible to interpret an urban situation.

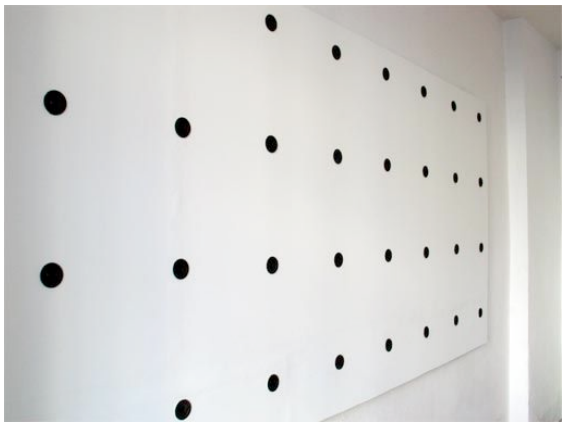
all recordings used in **16:9** happen in motion, many of them incorporate the locomotion being the basis for urban life. standstill is just a form of static motion. perceiving urban sound situations means to explore them by moving. perceiving the »**16:9**« means to reflect, discover and create an artificial situation imaging urban paths and situations by creating an audible image. virtuality gets interspersed by reality. acoustical perspectives, movements and situational urban moments form the base for this image for the ears.

in **16:9** the visitor gets integrated as the source of action in the installation. without action no sound will apear on the canvas.
by deciding how to mix and place a color the given result will always be a unique interpretation. the installation will no longer only represent an idea thought out by the artist. in a creative process the painter is able to reflect his thoughts into the installation character.

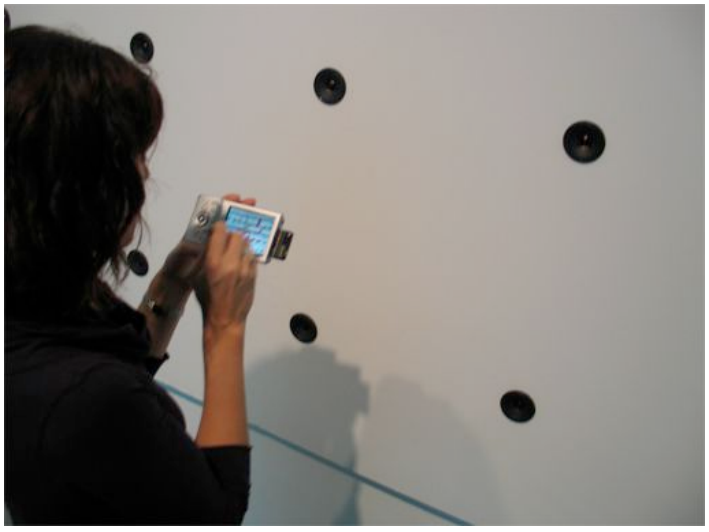


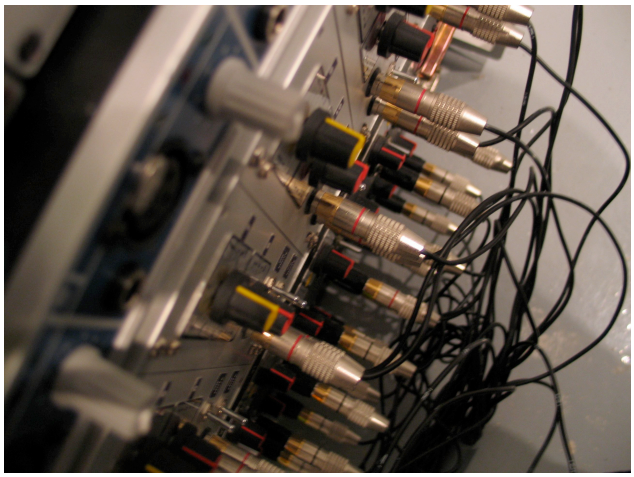
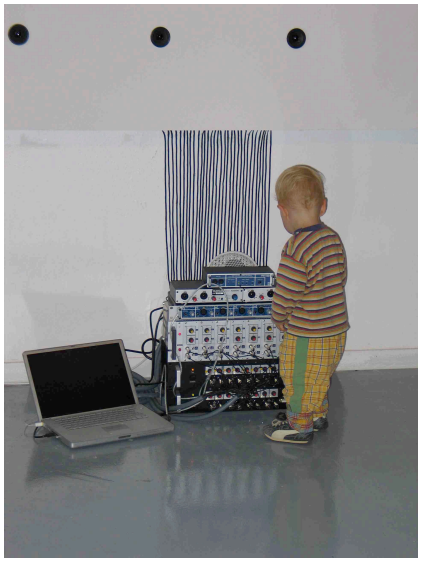
:the audiosynthesis

core of the audio synthesis is an especially developed software which offers the possibility to synthesize audio in realtime. using the tfog object by gerhard eckel the software takes small particles or grains like pigments in color from the urban recordings. these grains are modulated and processed in different ways. controlled by the painter concrete or abstract sounds are possible.



an important feature of the audiosynthesis is a special process which controls the allocation and qualities of the single grains or sound pigments that create the sound color textures. every grain will constantly vary its parameters on a very diminutive scale.
the given result is a sound texture that has a certain character but will always have a random variation in its timbre.
this refers to the reality of an urban situation in which we are faced with concrete sounds (a passing car for example) that are constantly changing its quality in small details. even if we listen to the same car the sound will always be a little different since the acoustical conditions are in a constant motion determined to the environment architecture and for example to the amount of people or objects in that environment. saying that ... every city has its own unique acoustical character.



: technical requirements

canvas to build the matrix : up to 144 speakers : up to 144 channel amplifters : g5 computer : up to 144 channel audiocards : da/ad converters : up to 1000 m cable : 1 sharp zaurus computer as interface : audiosynthesis software : p-client software