



# **Benoît Maubrey**

## **The Audio Ballerinas**

**Performances with Electroacoustic Clothes**

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Audio Tutu.  
 Duo with clarinette player.  
 Les Arts au Soleil / Aeronef, 1989  
 Solar-powered electroacoustic Tutu and (256K) digital sampler.

## THE AUDIO BALLERINAS

Towards the end of 1988 I had been experimenting with solar cells as a power source for the Uniforms (usually we use rechargeable 12-volt batteries) and came to the conclusion that they had to be mounted on a horizontal surface in order to catch as much of the sun's rays as possible. The artist Susken Rosenthal helped me build a transparent disc-like skirt out of plexiglass that could hang loosely on a belt from the waist. On this surface we placed the solar cells and electronics. A visiting dancer friend who saw the prototype explained that we had created a "tutu" -- the skirt-like piece of clothing that dancers wear in classical ballet pieces such as Swan Lake. This is how Audio Tutus came into existence. We also discovered that the hard but flexible tutus (made out of polycarbonat plastic) were ideal for mounting speakers, microphone jacks and amplifiers, not unlike a disc-jockey's mixing board. Under the guiding impulse of our new chief engineer, Manfred Thiem, we started experimenting with new equipment -- for example, a digital chip (256K) for sampling sounds, an electronic metronome, a photovoltaic resistor (to be used as a light sensor), and a miniature radio receiver. With their photovoltaic sensors the Audio Ballerinas can react to light, not unlike a Geiger counter responding to radioactive substances. The pitch of the sound could change according to the intensity of the light. This occurred when either their own shadows or the shadows from their surroundings (tree, clouds) interfered with the direct light as they danced. In effect, they could thus translate their body movements into sound. With their receivers, the tutus rendered audible the radio waves traveling through the air (my favorite sound is actually the "white noise" between the radio stations). In the end, we had a plexiglass dress that could spontaneously pick up sounds, record them digitally, play them back, amplify them, repeat them (via an electronic repetitive "loop"), and alter their pitch. For example, the tutus could record five seconds of the sound of a bell tower ringing nearby and instantaneously play back the sound. The additional electronic features allowed the wearers to change the speed of the loop or the tenor of the pitch (like a rudimentary sampler) to make the bell sound like a heavy brass gong or, in the other direction, a jingling bell. A piece based on this idea, called **Digital Memory**, is at the core of an Audio Ballerina performance. In each place where they perform, the first task of the group was to find a particular local sound -- a sound indigenous to that site or country -- that could be borrowed for this piece. These new technical additions allowed us to do away with the Walkman players and tapes that we had been using previously. In fact, equipped with these "digital memories" (samplers) the Audio Ballerinas had metamorphosized into a sort of mobile ensemble that, instead of playing regular instruments, went around "stealing" (i.e. recording) sounds from around them, altering and re-arranging them into multi-acoustic compositions.

## AUDIO BALLERINAS

Digital Memory

Performances using live sampled sounds

1991. **INTERFERENZEN**

**Art from West Berlin** Exhibition, St Petersburg.  
Performance with local Bolschoi dancers sampling Lenin's piano at the  
Lenin Museum (Marble Palace).



## AUDIO BALLERINAS

Digital Memory

Performances using live sampled sounds.



Sampling an Aborigine playing his didgeridoo. Third International Symposium for Electronic Arts (TISEA), Sydney 1993.



Sampling Franzl Kinsbender a famous Munich yodeler. Beck Forum, 1993.



The Audio Ballerinas sampling the saxophonist Mats Gustafsson. Kulturbro 2000, Ystad, Sweden



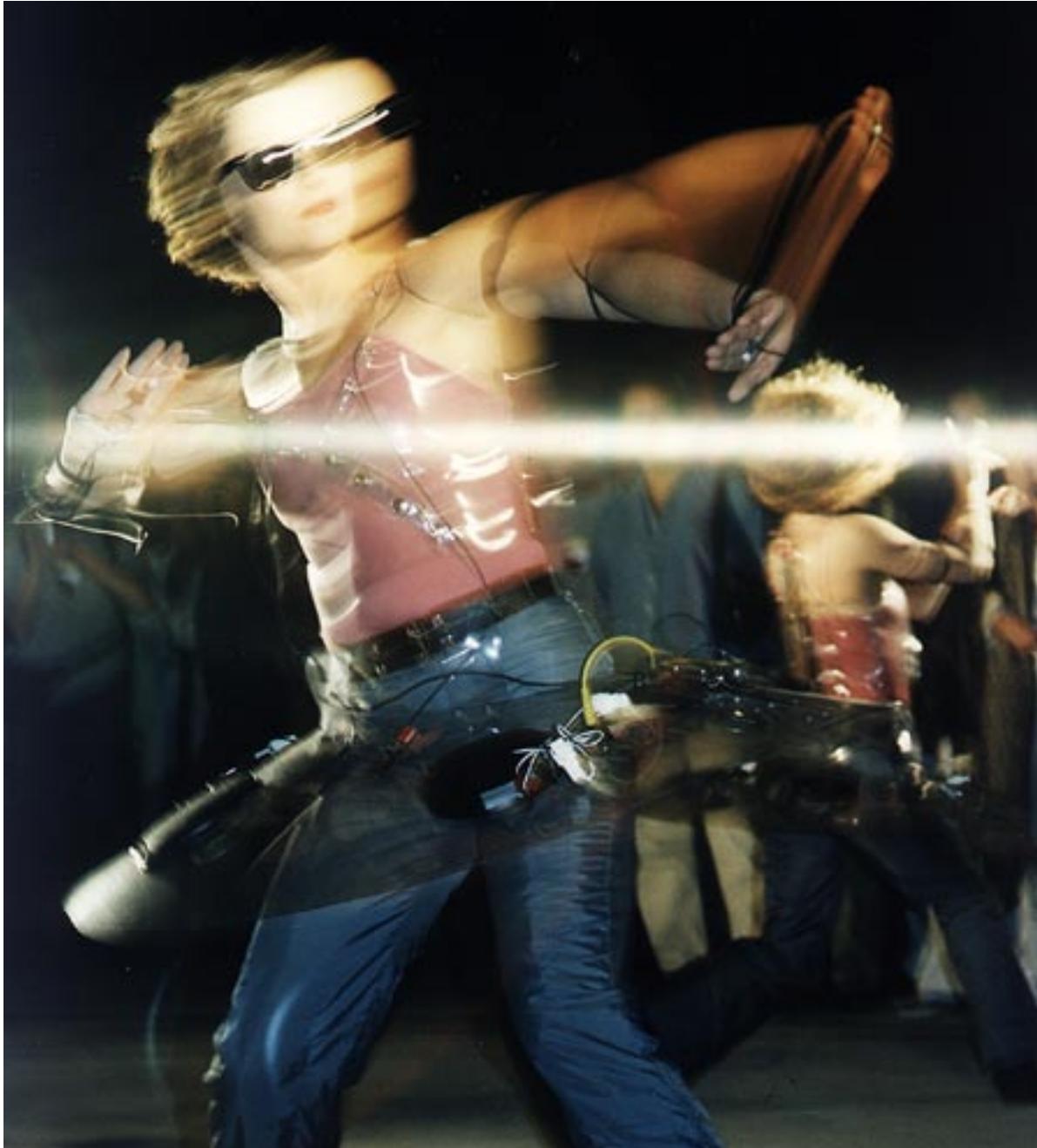
Miss Riga 310. Latvia 1991.  
Detail of a Ballerina performance  
with 4 Audio Sweepers.  
Sound: Radio Free Riga and amplified rakes.

In 1991 I was invited to take part in the INTERFERENZEN Exhibition in Riga, Latvia. The Iron Curtain was in the process of falling but the political situation was still uncertain. I was accompanied by the technician Manfred Thiem. We brought with us a plexiglass skirt from West Berlin and, using parts from a locally produced RIGA 310 radio and cassette player and working overnight in our hotel room, produced a Latvian Audio Tutu. With the help of a local performer we created a performance that started at the main train station and ended at our hotel. As a sound source for the Tutu we played live radio from Radio Free Riga: in the course of the ambulatory performance we drew a large crowd of people.

**AUDIO UNIFORMS**  
**the Audio Courtesanes**  
**Site-specific performances / Baroque Life**



In 1992 the Audio Ballerinas were invited by Berlin's Museums-pädagogisches Dienst to perform at the Friedrichsfelde Castle. For this occasion we borrowed Baroque costumes from a local theatre and slipped them on over the tutus. For one performance the performers were equipped with Walkmans with pre-recorded sound of breaking glass, for the second performance they sampled the Baroque instruments of a live quintet and ambulated through the park.



## AUDIO BALLETS

Performances with light

What began in 1989 as a site-specific project (i.e. solar-powered electro-acoustic tutus commissioned by the festival LES ARTS AU SOLEIL, l' Aeronef/Lille) soon blossomed into a full-fledged troupe. When I returned to Berlin with the electroacoustic tutus, I recruited a group of local dancers, trained them to operate the tutus, and organized a series of performances in the reunited Berlin. The Audio Ballerinas grew to include a core of 7 dancers, a choreographer, two engineers, and myself as director/manager/ and performer.

Since the conception of the Audio Ballerinas' in 1990 the equipment and choreographies have been systematically upgraded and streamlined. Due to the efforts of the technical staff (Jago Whitehead, Thomas Berndt, Gerrit de Vries) we are now using the 4th generation of Audio Tutus with modular (interchangeable) electronic elements. The performances have been to an extent "standardized": through the experience of international tours and the successive efforts of choreographers Hugo de Carvalho, Lotta Melin and Katja Rotzoll a repertoire of "audio ballets" have come into existence.

For example: the PEEPERS choreography in which light-to-frequency sensors enable the Ballerinas to produce sounds through the interaction of their movements and the surrounding light.



## AUDIO BALLETS

Choreographed Sounds and Orchestrated Movements:  
Performances with light

PEEPERS. Park Sansoucis, Potsdamer Musikfestspiele. 2000  
Sensors produce sounds through the interaction of the dancers' movements and the surrounding light.



## AUDIO BALLETS

Choreographed Sounds and Orchestrated Movements:  
Performances with light



**PEEPERS** (choreography: E. Brodin). Yokohama Arts Museum 1997.  
Light-to-frequency sensors enable them to produce sounds through  
the interaction of their movements and the surrounding light.

## AUDIO BALLETS

Choreographed sounds and orchestrated movements:  
Electronic sounds triggered by movement

Yamaha performance and detail (left) of instrument.  
Lowlands Festival, Holland, 2003.



In the year 2000 while shopping in a local department store I discovered a small child's electronic keyboard manufactured by the Yamaha company. Even with my own rudimentary electronic skills I was able to take it apart and discovered that the keyboard, once disencumbered of its plastic shell and keyboard, was a goldmine of electronic sounds, melodies, and rhythms that could be triggered by other ways than simply pressing the keys of a keyboard. For example by equipping the dancers with mercury tilt switches they could switch a sound on or off simply by moving their hands (or any other part of their bodies). From the spectators' street-level point of view (remember the Ballerinas with their wearable technology are always close to their public) it seems like it is the dancer's body that is generating the sound: a group of dancers simultaneously moving their bodies have the effect of an "orchestrated movement" -- in effect it's choreographed sounds that are occurring all around them. During the Kulturbro festival (Ystad, 2000) I had the group first try out with these movement triggers in their hands, over the course of the years the YAMAHA choreography has developed into one of the central elements of the AUDIO BALLETS.

**AUDIO BALLETS**

Choreographed sounds and orchestrated movements:  
Electronic sounds triggered by movement



## AUDIO BALLETS

Choreographed sounds and orchestrated movements

THE LINE performance, NTT-ICC Tokyo, 1998  
Rakes with contact microphones and  
Walkman sound (H.P.Kuhn)



The Line. INTERFERENZ Exhibition, St. Petersburg 1991.  
Performance in Catherine the Great's Marble Palace (Lenin Museum)  
Rakes with contact microphones and Walkman sound (HP Kuhn).

Like the Guitar Monkeys (see catalog AUDIO CLOTHES AND UNIFORMS), the Audio Ballerinas also use Piezo contact microphones in their performances. Instead of attaching them to second hand guitars, they fastened them onto other “instruments”, such as umbrellas or a simple metal rods, which function like giant phonograph needles being dragged on the ground and amplified via their electroacoustic tutus. Hence the original title of the piece: The Earth as a Record Player.

## AUDIO BALLERINAS

Solos, theatres and stages



Ingrid Martinez. Solo  
Audio Box, double light-to-frequency controller.  
Cambio Canstante, Venuela, Spain 2003

Over the years the Audio Gruppe -- all while fulfilling its various engagements-- has been consequently developing its repertoire. Members of the group --some of which have been involved in the productions for 10 years or longer -- have developed their own solos with a particular instrument and/or costume.

In 1994 Die Audio Gruppe started working with "indoor" theatre spaces: cooperating with the director Elisabeth Zündel at Berlin's Theater zum Westlichen Stadthirschen in **Audio Drama**. In this piece the actors performed within the audience (as opposed on stage and seperated from them) in order to showcase the fact that they were "wearing" their sounds. During this time Elisabeth Brodin perfected her **Seguirya** piece (a dancer moving in a circle of light using a light sensor). Each evening Benoit Maubrey produced his own **Feedback Fred** character wearing an oversize loudspeaker box on his back and "feeding back" his own voice through it via a microphone mask: this personality can likened to a cross-cloning of Hamlet and an electronic-loaded Hunchback of Notre Dame. Two years later **Audio Ballerinas and Electronic Guys** was presented at The Kitchen in New York City: this piece was a collage of different audio characters set in an around the audience.

More audio-figures began to emerge from the collaborative street performances, the Tokyo performances added the Audio Geishas' sampler-and-stroboscope lighting duos to the palette (see catalog AUDIO GEISHAS and ASIAN THEMES). But it was only in 1998 after the creation of the Audio Kimonos that the Gruppe was able to present an evening at Berlin's legendary SO36 club. This piece included 4 Audio Ballerinas, 4 Audio Geishas, and 4 different solos (**Electronic Guy**) with a total of 12 participants. Six months later a similar event was presented at the Malta festival in Poznan in the courtyard of the local classical ballet school where the core personel of the Audio Gruppe was supplemented with 3 of the school's teenage pupils. In February of 1999 DAG was invited to present 3 solo works at the International Dance and Technology Conference (IDAT) in Phoenix, Arizona where the group was able to hold its own against bombastic multimedia "intelligent" stage productions. In this context it is important to note that some of the Gruppe's costumes have muted into highly individualistic and self-contained sound units. These are individual "phonic" bodies -- not devices of highly developed technology-- that produce their own personal sounds and movements in intimate and close-to-the-spectator performances.



Audio Ballerinas and Elisabeth Brodin  
Peeper Performance  
Yokohama City Museum, 1997.

## AUDIO BALLERINAS

Solos, Theaters and Stages

In 2002 I was approached by Berndt Schindowski, chief choreographer at Musiktheater im Revier (Gelsenkirchen Opera House) who commissioned me to create 12 electroacoustic costumes for **HIGH FIDELITY**, an opera on Elvis Presley. His wish was to adapt the Digital Memory choreography to a dance piece using the late singer's songs (in effect: sample, play back, and distort the original songs through the dancers' movements).

During a recent festival in Seoul I had discovered portable samplers that were used by Korean merchants to sell their ware at local produce markets -- recording and amplifying their own voices with the daily prices of fruit and vegetables. They functioned on the 12-volt batteries of their small trucks and were very dependable. These were integrated into the new costumes. The engineers Thomas Berndt, Gerrit de Vries and Jago Whitehead re-wire the devices in the same way as the Ballerinas' Tutus: pitching mechanism to alter the sound and photoresistors to enable the dancers to alter the sound via light.



**AUDIO BALLERINAS**  
Solar events



Detail of a solar-powered Audio Tutu: the LINE performance.  
1990, Festival les Arts au Soleil/ Aeronef, Lille, France.  
Electroacoustic Tutu, solar cells, piezo microphone and metal rod.

In 1991 the Audio Ballerinas were invited to perform at the **European Land Art Biennale** in an open coal mining area near Cottbus. In this situation we demonstrated alternative energy forms in a performance context.

Photo below right: solar-powered electroacoustic Tutu amplifying a piezo microphone scraping along the abandoned train tracks.

Photo below left: 7 East German volunteer Ballerinas with solar-powered electroacoustic Tutus and “apple” radio receivers. The radios are sold as electronic kits and can be powered by electrodes inserted into apples. Instead of apples we used solar cells: in the course of this dark-to-dawn performance (5 to 8 AM) the Audio Tutus gradually reacted to the increasing daylight: playing at first white noise and later -- when the sun has fully risen -- amplifying a cacophony of local radio stations.



Benoît Maubrey/ the AUDIO GRUPPE  
Performances and Festivals (a selection):

(2011) SPOR festival/Aarhus, Festival Les Accroche-Coeurs/Angers, (2010) TonSpur Expanded: the Loudspeaker/Vienna, Zero1 Festival/San Jose, (2009) Berlinische Galerie, Berlin, NAISA, Toronto, (2008) MOSTRA DES ARTES SESC/ Sao Paolo, MUSICA EX MACHINA/ Bilbao, (2007) IM AUGES DES KLANGS/Joseph Beuys Archive Moyland, INGENUITY/ Cleveland, (2006) Sitelines Festival/ NYC, SIGGRAPH /Boston, Taiwan Digital Arts Festival, (2004) AUDIO IGLOO Singuhr-Hörgalerie/Berlin, LEM Festival/Gracia Territoria Sonor/Barcelona, (2002) Location One/NYC, (2001) KunstMuseum/Wolfsburg, New Haven Festival for Arts and Ideas, Seoul Performing Arts Festival, Musée des Arts et Industrie/Saint-Etienne, (2000) Monaco Dance Danses Forum, (1999) International Dance and Technology Conference, Phoenix/Arizona, Danz-dag Kulturhus Aarhus/Denmark, Les Nuits Savoureuses de Belfort, (1998) MALTA Festival/Poznan, Stockton Riverside Festival/UK, International Symposium for Electronic Arts/Chicago, (1997) ICC-NTT Tokyo, ISEA/Chicago. SONAMBIENTE Sound Art Festival/Berlin, (1995) Sound Art Festival/Hannover, (1994) International Symposium for Electronic Art/Helsinki, (1993) MEDIALE/Hamburg, ULTIMA Festival/Oslo, (1992) Cleveland Performance Festival/Ohio, TISEA/Sydney, (1990) Festival les Arts au Soleil, Aeronef/ Lille, Sound Symposium St. John's/ Newfoundland, 1989 Festival PERSPECTIVES/Saarbrücken, (1988) Festival des Arts Electroniques de Rennes/France, „Parcours Sonores“ Musée de La Villette/Paris, Festival of European Street Theatre, Aurillac/ France, (1996) STEIRISCHE HERBST Graz,/Austria, (1986) ARS ELECTRONICA Linz/ Austria, The Mattress Factory, Pittsburg/Pa, Berlin Atonal Festival.

Workshops / Guest artist lectures:

Oberlin College, Concordia University, Johns Hopkins University, Virginia Commonwealth University, Dresden Academy of Arts, Academy of Arts Enschede, Simon Fraser University, George Washington University. MIT Media Lab, IDEA Center Colorado College.

Awards: Prix Ars Electronica 1991 Anerkennung, European Award for Street Theatre/Holzminden 1995, Franklin Furnace Fund for Performance NYC 2006, Palmarès du 35e Concours International de la Danse 2002 (Mention Speciale). Marler Video Installations Preis 2008, Skulpturenmuseum Glaskasten Marl.

Grants: 1999 Hull Time Based Arts, UK.

2006 Composer-in-Residence, Schloss Wiepersdorf, Brandenburg, Germany.

2010 Artist-in-Residence at MuseumQuartier Vienna.

2011 DIVA (Danish Arts Council Grant), Aarhus/Denmark.

Bibliography:

LEONARDO, Vol.28, No.2, pp.93-97, 1995, Audio Jackets and Other Electroacoustic Clothes.

BENOIT MAUBREY/ DIE AUDIO GRUPPE, catalog 1985.

Die Audio Gruppe 1982-1998, catalog 1989.

-- PERFORMANCES WITH ELECTROACOUSTIC CLOTHES, DVD 2007.

-- KLANG und BEWEGUNG, Berichte aus der Musikwissenschaft, Shaker Verlag ISBN 3-8322-2270-7-

-- Techno Textiles: Revolutionary Fabrics for Fashion and Design (9780500280966): Sarah E. Braddock, Marie O'Mahony,

-- See Yourself Sensing from Madeline Schwartzman, June 2011m Black Dog Publishing, London.