

# **The "Ambient Jukebox" Multi-Dimensional Random Sound Environment**

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Surround-sound and other 3-dimensional sound environments hold great promise in the future of recorded music. In traditional stereo, sound can only be separated into a flat uni-dimensional configuration, coming from only two sound sources. In a natural acoustic environment, sounds come from all directions, reflecting off various surfaces. In fact, stereo panning is a very primitive attempt at recreating an acoustical space. For example, you might pan a guitar to the left channel to suggest that the player is situated on the left, but in a real environment, reflections would be coming from all directions.

I coined the term Ambient Jukebox ("AJ") to describe a system where multiple compact discs installed in multiple CD players set on random-play, create richly varied sound environments. AJ discs are specifically created to be simultaneously played in two to four CD players, with optimal effect using three, with strategically placed loudspeakers.

Up until the compact disc was invented, a concept such as this would not have been possible. The medium is indeed "the message" in this case because the nature of the medium makes this type of music composition and performance possible. Tape is inferior in that it doesn't have the capability to randomly play tracks; vinyl has this capability, but you have to physically move the tone arm (defeating the random quality); minidisk is not widely used; sounds can be played off of a hard drive, but you would need four computers (and computers might be too random.) And once DVD-R is affordable, the possibilities for AJ are staggering, as one could then also include randomly generated images, text and animation.

The most unique aspect of AJ is the element of surprise: You can never predict how the tracks will shuffle and combine with one another. It's similar to watching TV with the sound off while you have music playing: sometimes the sound and images will come together in interesting contexts. In an AJ environment you select which sounds will be a part of your "sound world", which then become the subject of the composition.

A friend of mine had traveled to Costa Rica in the early 1990s and had taken several tapes of field recordings in and around the Orosi Valley. I logged each of these tapes and made a list of the segments that I thought would be interesting, and brought them into the computer and edited them using a wave-form editor. Once I had these collected, I composed other musical segments around the environmental sounds, mastered the complete set of sound segments onto a CD, made several copies of that disc, and gave it the title *Church Ruins*.

My initial conception was that each disc would contain a certain type of sound, e.g., disc 1, guitar sounds; disc 2, textures; disc 3, bell sounds; disc 4, sound effects, etc. After thinking this out, I realized that the same type of sound would always be coming from one set of speakers, and would consequently be quite boring. It made more sense to have all the sounds on one disc, make multiple copies of that disc and install it in multiple players. (This keeps the resultant performance completely

blended and completely random.) Once sounds are recorded into the computer they can be copied and/or manipulated and included on other AJ compilations. On *Church Ruins*, I used sounds from another AJ production, "Orientale"; further reshaping them to fit the concept of the new production. The beauty of AJ is the idea of reusing pre-existing material and incorporating it into new sound collages. In effect, this is like software versions: code is added and subtracted to create a new product based upon what had originally been there.

While I was trained in the "old school" of music composition where you actually play and write for traditional instruments, I feel that this new way of making music has interesting possibilities. Its advantage is that you can achieve compelling surface elements with a minimum of effort.

The modern sentiment (and a quite intelligent one) is that effort no longer equates with the impact of the finished product or the strength of the original idea. One could spend four years studying at Julliard and another four years writing a symphony and few would care about it, and contribute next to nothing to the current cultural canon. I don't want to give the impression that there is never an effort involved using modern methods, as *Church Ruins* took quite a long time to shape into the final product. One could even say that the level of craft parallels with Baroque music in the 17th century, and is even as revolutionary. Now, instead of learning to create art out of the equal-tempered tuning, we learn how to shape sound files into interesting works of art. Instead of showing someone how to write second-species counterpoint, we show them how to take a drum loop, deconstruct it, map the individual samples across the keyboard and use it as an instrument in a composition. In fact, this process can be as painstaking as it was for J.S. Bach sitting at a table scratching notes with a quill!

## **Parallels With Film Editing, Dreams**

In many ways, the method by which we now compose and record music is very much like the editing of film. Film editing takes the linear experience of real life and rearranges the sequence of events to construct a storyline, and places things in specific contexts ("reel" life). This is much different from real-time performance, where there are no second chances, and the only option is to do it right the first time. You could film a theatrical event and later go back, rearrange the sequence of events, include a soundtrack and you'd have something completely different from the actual performance.

By simply adding a sound to a visual event you can change its meaning. Placing one event before another changes the viewer's interpretation of the moment. And in music, making recordings gives us the illusion of things taking place in one moment, but in fact could have taken place days, weeks or even years apart.

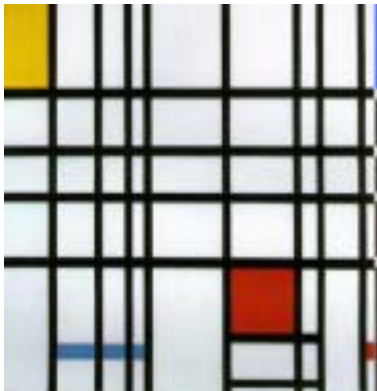
In the mid to late 1960s, recording technology grew exponentially. When the Beatles started experimenting in the studio with the new 4-track machines and studio effects they suddenly had the ability to simulate environments and contexts in lots of creative ways. At the time this was seen as a solution to the problems associated with live performance (the primary one being the inability to be heard over screaming teenage girls, and secondarily the wealth of creative possibilities in the recording studio "vacuum"). With the expertise of composer/producer George Martin,

who introduced the Beatles to the world of experimental music, they now had the option of playing with tape and effects, which had many similarities with the editing of film.

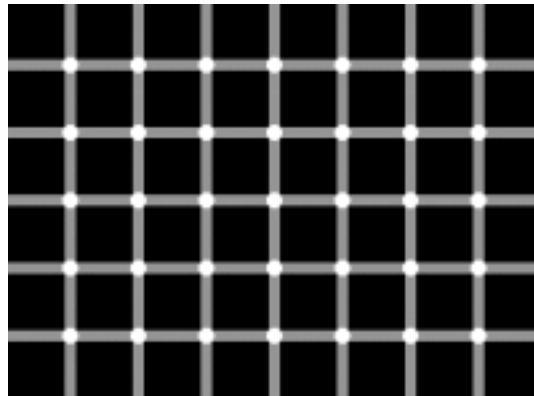
With *Memory Theater*, I wanted to apply this metaphor to music. Being a big fan of David Lynch, I am interested in how film and the dream-state inform each other, and how they might perhaps simulate reality.

Memories and dreams are like edited films, although the "editing" that the brain does seems purely random--although there may be times when events are more than a mere coincidence. Most of us dream in fragments, and when we awake, assemble the fragments into a meaningful narrative, connecting the dots into an identifiable shape. We see them as a sign of something that might happen to us in our lives, and in many instances they in fact do.

An edited film is also a bit like an "optical illusion" where the brain perceives something that is not inherently there, but becomes an emergent property of simultaneous, overlapping events. If you are familiar with the geometric paintings of Piet Mondrian (e.g. *Red, Yellow and Blue*, 1921), you notice that where lines intersect, you see dots. As the eye and brain process the lines, the brain automatically creates the effect. Similarly with "Memory Theater" the random contexts (lines) create a narrative (dots), and contrives a story, even though there really is no "story" per se.



*Red, Yellow and Blue*



As abstract expressionist painter Willem de Kooning once commented on Mondrian:

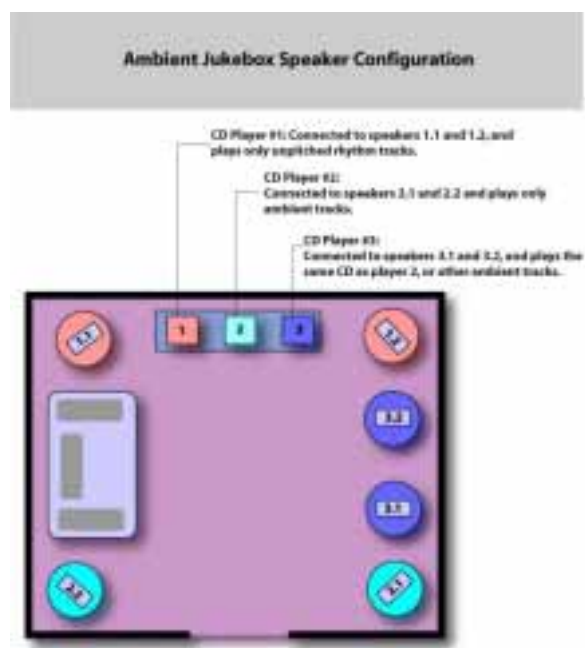
"Something happens in [a Mondrian] painting that I can not take my eyes off... it has terrific tension. It's hermetic. The optical illusion [of] Mondrian is that where lines cross they make a little light. Mondrian didn't like that but he couldn't prevent it. The eye couldn't take it, and when the black lines cross they flicker. What I'm trying to bring out is that form is [natural in the] point of view of eyes...that's the way you see it."

# **Systems & Configurations**

## Systems and Configurations for Ambient Jukebox Performance

I currently use three inexpensive stereo systems, consisting of my main stereo, a compact Denon unit, and a portable Sony CD player with computer speakers attached. There is no need to spend lots of money on stereo systems, unless fidelity is important to you. I find that the sound quality of my systems is adequate, although the cheaper computer speakers don't have a good bass response. If you already have one stereo, you will need to spend at least \$300-400 to get another 2 systems up and running.

### *Aerial view of speaker placement in my studio:*



## Speaker Systems

### **High-End, Expensive: *Glass Sound***



Glas Platz's Glass Sound is a unique flat glass loudspeaker incorporating NXT SurfaceSound technology. Glas Platz is a German-based manufacturer of electrically conductive glass systems, setting sound and design trends, simplifying the unobtrusive integration of audio technology into interior architecture.

For a complete description of the glass panel speakers, visit the NXT Web site:

<http://www.nxtsound.com/>

### ***Glass Platz contact information:***

Glas Platz  
Auf den Pöhlen 5  
51674 Wiehl-Bomig  
<http://www.glas-platz.de>  
Tel.++49-2261-78900 - FAX:++49-2261-789010  
e-mail:glas-platz@mail.oberberg.de

### ***Less Expensive:***

Altec ACS22	\$29.99
Altec ATP3	\$99.00
Monsoon Flat Panels	\$149.99
Boston Acoustics BA4880 (on stands)	\$199.99
Boston Acoustics (small)	\$69.99
Labtec LCS 2514 (4-channel)	\$79.99

## **CD PLAYERS**

Any CD player can be used in an Ambient Jukebox configuration, as long as it has a random/repeat mode. Most players have both, but I have seen some players (including DVD players) that cannot repeat. This is important, as you want the discs to be playing for long periods of time, especially in a gallery installation.

However, within the next few years, most consumers will be buying universal DVD players, which will allow you to play any type of disc, including your audio CDs. They are a bit expensive at the moment, but I predict that the price will come down to approximately \$200 by 2005.

# Ambient Jukebox Productions

## **Ambient Jukebox Productions**

### **"Memory Theater 1.0"**



### **Script/Treatment**

#### **Characters:**

Dalila Shades  
Barbara Shades  
Robert Barnard  
Thomas Troy  
Sergeant Jim Sunday  
Parthenope, the palm reader  
Circe  
Cosme

#### **The dream-myth: Ulysses and the Sirens**

*The Sirens had the power of charming by their song all who heard them, so that mariners were impelled to cast themselves into the sea to destruction. Ulysses, under the spell of Circe, told his mariners to stop their ears with wax, so that they should not hear the siren song; to have himself bound to the mast, and to enjoin his people, whatever he might say or do, by no means to release him till they should have passed the Sirens' island. Ulysses obeyed these directions.*

*As they approached the Sirens' island, the sea was calm, and over the waters came notes of music so ravishing and attractive that Ulysses struggled to get loose and, by cries and signs to his people, begged to be released; but they, obedient to his previous orders, sprang forward and bound him still faster. They held on their course, and the music grew fainter till it ceased to be heard, when with joy Ulysses gave his companions the signal to unseal their ears; and they relieved him from his*

*bonds. It is said that one of the Sirens , Parthenope, in grief at the escape of Ulysses drowned herself.*

**Cut to a café in a small rural town in California, 50 miles east of L.A.**

Dalila Shades is the once strong and feisty daughter of the director Robert Barnard. She sits contemplatively in the café on Farrington Road and watches the burning car, thinking it's the vehicle used as the getaway car, and thinking about how confused she is about Sunday. It's now almost Christmas, almost three years after the incident at the Sanbah. This is the car that Jim Sunday had been looking for.

She explains the influence her father had on Sunday who was later to become known as Mr. Eternity. A photo of Tom Troy appears. It was John Ridley's sermon 'Echoes of Eternity' which supposedly converted Circe to Christianity in the 1930s. It was after this sermon that Circe took a piece of chalk from his pocket and wrote in beautiful copperplate script, the one word – Sanbah, and the sidewalks of L.A., which would influence many for the next four decades. The image of Parthenope appears as he walks away from the Harbour Bridge wearing a dark coat and depression era hat. 1920s Archival footage of two female swimmers seen from overhead lay on a cliff face. The turbulent sea hits the cliff as the sea runs over their bodies. Sunday's poetic sermon booms loudly as the sea returns to hit the cliff face as the swimmers hold on tightly.

**On the CDs:**

*(2-disc set, comprised of either data CD and Audio CD, or audio CD and DVD)*

- Set 1:           The data CD/audio CD set will allow you to only play the audio portion of the Memory Theater production. While the data CD has video clips, they cannot be projected onto screens due to their small size and low resolution. The audio tracks and wav file versions can be used freely (and are encouraged to be used freely). However, the video clips, as well as other text files, such as scripts and e-books are secured with copyright.
- Set 2:           The data CD/DVD set will allow you to play both the audio and video portions of the Memory Theater production. All video clips are on the DVD and are high-resolution, and can be projected onto screens. As with Set 1, the audio tracks and wav file versions can be used freely, but not video clips or other files.

## **Memory Theater 1.0 Audio Files:**

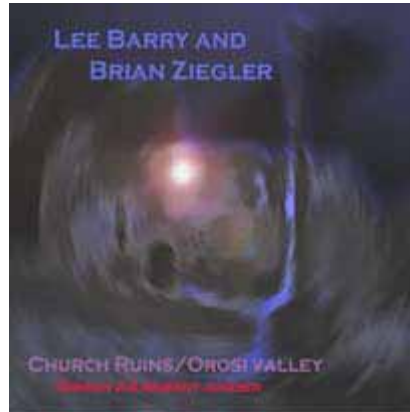
ahhs.wav  
ann\_ahs\_2.wav  
ann\_ahs\_3.wav  
ann\_ahs\_4.wav  
np\_nc\_camilla\_rhodes.wav  
np\_nc\_camilla\_rhodes\_mod.wav  
np\_nc\_camilla\_rhodes\_nonoise  
np\_nc\_centauri\_waves  
np\_nc\_cyclotron\_01  
np\_nc\_cyclotron\_environ  
eflat\_01  
eflat\_05\_01  
np\_nc\_emergency\_responding  
enat\_03\_02\_grv  
fog\_horn\_fade  
fog\_horn\_phase\_01  
np\_nc\_footsteps  
fsharp\_02  
fsharp\_06  
gsharp\_03  
oohs  
phased\_oohs  
phased\_oohs\_ascend  
np\_nc\_rain  
np\_nc\_rain\_2  
romantic\_01  
np\_nc\_slow\_church\_bells  
soft\_telephone  
np\_nc\_squad\_01  
np\_nc\_sssss  
string\_swell  
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## **Use of Sounds**

Original sounds on AJ disks are royalty free and you can use the sounds wherever you like; and are in fact encouraged to use them and transform them into other sounds. It is the nature of AJ environments that sounds are shared and recycled. However, the actual series that I produce are copyrighted as a sound recording, meaning you cannot duplicate the disc itself and sell it.

## **Other Ambient Jukebox Productions**

### ***"Church Ruins – Orosi Valley"***



My friend Brian Ziegler traveled to Costa Rica in the early 1990s and had taken several tapes of field recordings in and around the Orosi Valley. I listened to each of these tapes and made a list of the segments that I thought would be interesting, and composed other musical segments around the environmental sounds. I used sounds from another AJ production, "Orientale"; further reshaping them to fit the concept of the new production.

# Ambient Jukebox Ideas

## **Ideas for Ambient Jukebox Performances**

1. Connect the outputs of each system to a mixing board and record the output. Effects and other processing can be added as well.
2. Make a set of discs with 3-5 sounds on it and random loop them, recording the output. (Instant film music, with lots of variations!) These discs can also be used in live performances using portable players and controlled at the mixing board
3. If you have recorded tracks in the studio, save individual tracks as wave files, apply treatments and effects, burn a CD, and then incorporate the new sounds back to your mix. (This is great for ambience)
4. Ambient jukebox with visuals: Four projectors on one screen, dissolving into each other. Another approach would be to use contextual information, for example, images of churches placed against war scenes. (This would be an ironic juxtaposition with soft music.)
5. Ambient jukebox with dance: Choreograph a separate routine for each track. It can also be left to each dancer to create their own choreographed representation of the track that is currently playing.
6. Ambient Jukebox tracks are useful for tracks in multimedia and films, as they create endless variation based upon a well-defined set of diegetic sounds (in the world of the film) and non-diegetic sounds (outside the world of the film).