EXTENDED PLAY
Curated by Ursula Block & Christian Marclay

Short Excerpts
recorded at Roulette NYC
Engineered by James Staley

1. Charmin’ Chatty, doll record by Mattel, Inc., 1962
2. Boyd Rice, Non, single, from lock grove #3 1979
4. Lee Renaldo, lock groove from “From Here to Infinity”, 1987
5. R.I.P. Hayman, design for random endless play record, 1983
6. Lou Reed, lock groove from “Metal Machine Music”, 1975
7. Die Tölliche Doris, “You see we come as friends” 1983

EMILY HARVEY GALLERY
537 Broadway at Spring - 2nd Fl.
New York, New York 10012
(212) 925-7661
EXTENDED PLAY: The Art of the Meta-Record

By Peter Frank

Our century has been characterized by the rapid - indeed, accelerating - turnover of technologies. The devices that surrounded our grandparents metamorphosed into more efficient versions of themselves for our parents; our parents' appliances, in turn, have evolved much further for our benefit - and many more such devices have crept into extinction. Our grandparents watched silent films in black and white. Their children enjoyed "talkies," "natural" color, and Cinerama. We take in movies made for television on ever-larger screens in our own homes. The manual typewriters that made secretaries' labor simpler two generations ago became electric typewriters and mimeograph machines after the war; now, of course, our world is filled with desktop (even laptop) computers and photocopy machines, verifaxes and modems. Yesterday's oven is today's microwave; today's answering machine is tomorrow's televisiphone.

Nowhere is the shape of progress more literally displayed than in the commercially distributed sound recording. New developments that revolutionize this realm occur no less than once every other decade. The turn-of-the-century Edison cylinder gave way in the 1920's to the 78 rpm disk, which in turn yielded to the 33 and the 45 after World War II. Now compact disks are replacing vinyl. As the vinyl phonograph record slowly makes its way into history, its nature as an object - a relic of its time and a physical conformation of material imbued with association - comes to the fore - not least for artists.

The 12 inch - or 7 or 10- or even (rarity of rarities) 15 inch - vinyl disk is at once a sculpture, a support surface for painting or bas relief, and a mutable objet trouvé whose manipulation can produce not just visual but aural assemblage. Given the relative stability of the basic format since the cylinder gave way to the disk more than 60 years ago - a form that carries over, however obliquely, to the CD - the functions with which the record is associated have become fixed signals, recognized to some extent universally, and to a very great extent by various social sub-groups (e.g. teenagers, audiophiles). Thus, when an artist chooses to depict a record or modify the actual record object, he or she is reacting to the object-become-icon, the readiest social cipher for the retention, repetition, and (thereby) dissemination of sound - sound of any type, but especially music.

A genre of records has emerged from artists' interest in the function and format of the phonograph record. Within the genre of artists' records distinct forms can be discerned. One group, probably the largest, simply captures sound produced in the now vastly-expanded context of "visual art" - sonic documentaries of time events, for instance, sound reproduced as aural equivalence to visual concepts, and straightforward music rendered by artists (as composers and/or instrumentalists). Another sub-genre concentrates on the important factor of packaging, that aspect of commercial phonography (sic) open to the traditional skills of visual artists.

The sub-genre explored by this exhibition is perhaps the most intriguing - in great part because it is perforce the most experimental, and in part because non-artists as well as
artists contribute to it, often unwittingly. This sub-genre of artists' records concerns the manipulation of the record-object itself, as an image or as a mechanism, as a means to sonic enhancement or as one to sonic sabotage, as a means of tying physical and sonic material together or as a way of determining sonics material through physical properties peculiar to the record.

The simplest such manipulation is the "endless end groove," a closed spiral on the vinyl surface which causes the needle to lock into the final rotation of the disk and repeat its sound ad infinitum. More daring experiments in the grooves have provided records with multiple tracks - yielding different sound, in unpredictable sequence, each time the needle is set down on the record - and a "wandering groove" which sends the needle straying all over the record. (Even if no sound is produced, the "tone arm ballet" that results becomes an art performance.)

Records also exist which expand the "Picture-disk" format and other uses of colored vinyl into new areas of visual elaboration. The most substantial of these established conceptually sophisticated connections between visual and sonic content. There are records and unique record-objects that reformulate extant records, through collage and, less frequently, re-recording. And there are as well the usually unique record objects which are playable on a phonograph, but which clearly will produce no sound whatsoever - or, conversely, will torment the needle with grossly inappropriate surfaces.

"Extended Play" draws from the work of recognized artists, recognized musicians, and sources recognizable as oddball geniuses contributing peripherally but cleverly to the social discourse of common objects, helping to make those objects a little less common. They, too, are artists of a sort, folk artists at a time when folk art can be mass-produced as well as hand-crafted. And, like the recognized artists, such artists-in-the-vernacular exercise a keen sense of play and an irrepressible spirit of invention, a delight in tinkering with the given and transforming it into something that wasn't quite there before. The innovations in phonography exemplified in "Extended Play" do not rival the CD as milestones in the history of recorded sound. But history is built of small steps as well as giant leaps. The same can be said for the history of art - in which these records, created by artists and folk artists alike, determine a small but crucial step in the meldings of traditional aesthetic practice and the new mesh of communications media which binds us all closer together.

1 The prediction is that DAT cassettes will replace CDs, but that DATs, in turn, will cede to another, yet more advanced disk format.

2 In an essay on artist (and "Extended Play" co-curator) Christian Marclay's work I observed that "Sonic gratification transmutes to visual and haptic satisfaction when one takes possession of a record (even if only for awhile). Record packaging - especially as it has evolved since the emergence of the long-play album in the late 1940s - gives clear indication of this (...). But so does the standardization of the record format itself, and the signator frisson this standard format has taken on in our increasingly layered public language of images and shapes. To the 1950s teenager the image of a record, in photographs or drawings, evoked fun, liberation from routine, and association with one's peer group. This evocative quality burgeoned during the pop revolution of the '60s, and succeeding waves of change in musical expression have at worst given such representation an ironic edge of nostalgia." (Frank, Peter, "Christian Marclay," in Fri-Art. New York: Pro Helvetia Foundation, 1985, pp. 140-141.)
In 1986, I organized a show at Gelbe Musik* in Berlin entitled Artists' Records and Record Objects. Then in 1987, I curated a similar show on a much larger scale for Vorsetzen Gallery in Hamburg. In the small Berlin space, it was only possible to show a few essential works. Hamburg's larger space made it possible to present different aspects of the idea of artists' records.

I not only included records on which visual artists documented their sound works but records with printed covers designed by artists and original artworks on covers; record objects such as Nam June Paik's classical Random Access, where several records fixed on an axis are revolving on a turntable while the listener uses a portable tone arm, deciding what part, which record and at what speed to hear it. There were collages using records as objects trouvés; installations with records and turntables; extensions of the record through other media, such as Claus Bohmler's videotape of his record collection. one only sees and hears a turntable playing records, with an occasional hand changing the discs - TV as record player. There were pieces in which records were used as sculptural material, an ironically suitable way for the record to survive in the age of the compact disc; and there were catalogs incorporating flexidiscs.

In "Extended Play" Christian Marclay and I examine only one aspect of this broad field of artists' records. We have limited the show to the record format and the changes made to it so as to expand it's sound possibilities. Changes in the tradition of Moholy Nagy - that is, not using the record medium as an instrument of reproduction, but creating an authentic "record music".

Ursula Block
NYC 1988

* I founded Gelbe Musik in 1982. It is a store specializing in records of all kinds of experimental music - artists' records, early avant-garde, new musics, minimal music, sound poetry, extraeuropeen music, art rock, improvised music, etc. At the same time it doubles as a gallery showing visual material related to sound - works by composers and visual artists. There have been many exhibitions, among them John Cage, Earle Brown, Hanne Darboven, Henning Christiansen, Josef Matthias Hauer, Ivan Wyschnegradsky, Gerhard Ruhm, Die Tödliche Doris, Dieter Schnebel and Piotr Sobieralski Nathan.
Extended Play

Most people think that when they hear a piece of music, they're not doing anything but that something is being done to them. Now this is not true, and we must arrange our music, we must arrange our art, we must arrange everything, I believe, so that people realize that they themselves are doing it, and not that something is being done to them.

—John Cage

As the analog phonograph record is being outmoded by the digital Compact Disc, it is an appropriate time to look back on this object that has captured the sounds of almost a century for (a relative) posterity. The record medium has changed the musical message. The commodification of music has transformed the very nature of music and its role in our society, altering our relationship to musical works, performers, and tradition. As a result, there is a strange perversity in the relation between a recording and the original sound, the recording seems to precede the music, as our acoustic world is more stimulated by simulation. Music, one of our most elusive arts, is now available in endless reproduction. Mass production and distribution have engulfed our live-music culture almost completely, leaving us in a solitary relationship to a material object. The distance between live and recorded music is a separation of time and space, an alienation from the original participatory experience of music.

Extended Play focuses on records that go beyond the documentary value of the medium. The records presented here question the medium, and offer creative alternatives within the limits of the format. In doing so, they engage the listener in a new relationship.

As opposed to a traditional record—a finite document of a time segment (real or fabricated in the studio), repeatable and similar with every play—Boyd Rice's Pagan Muzak is playable at any speed, centered or off-centered, and for any length of time, since each "song" is an endless lock groove. The listener cannot stay passive with such a record and becomes involved in the composition's process.

Hiphop DJs are an extreme example of this compositional involvement as they "cut" on multiple turntables the open-ended "mixes" and "bonus beats" of 12" singles and the extended versions of EP's (Extended Play). They are liberating the music from its recorded structure, and have generated "interactive" records that are non-finite compositions, available to their peers for mixing and matching. (This hands-on-records attitude is also implied in "backward masking"; see C. Nivek's article.)

Record formats have forced musicians to conform to time limitations. The first flat disc of 1894 had only a 2 minutes playing time. The traditional length of an LP, 23 minutes per side, though now extended to 30 minutes with the "direct to metal" mastering technique, is still not enough for long works like operas. The multiple
record sets have the disadvantage of breaking up the continuity of a composition. Some composers have tried to find solutions to this time limitation by allowing their records to be played at a slower speed, as with La Monte Young and Marian Zazeela's 1969 record which can be played at 33.16 or 8 rpm. Another way to extend the playing time is to diminish the width of the grooves (to the expense of dynamic range) as Brian Eno did in his "Discreet Music" of 1975.

Since the beginning of the industrial age, machines have been abused for the purpose of autonomy, spontaneity, and creativity. In the 1920s, Moholy Nagy at the Bauhaus was experimenting with records "played backwards, scratched to alter rhythms or cut in their grooves so as to produce howling 'glissandi'". In the 1960s, Milan Knizak abused the surface of records by burning them, scratching them, or cutting them and gluing different parts back together, creating unique collaged records. At the same time, Ben Vautier, in a more direct appropriation, would simply glue a new label with his own name on found records, or suggest a faster playing speed.

The permanence and identity of a composition, so important to traditional music, are questioned by these works. Indeterminacy, as an alternative, and exemplified by John Cage's Composition 4'33" (1952), guarantees that every performance will be different. (Ironically, though, 4'33" has been "frozen" in vinyl.) R.I.P. Hayman's drawings and tests for an "endless random access record" (1980-83) are an excellent attempt to reconcile the finality of a record with indeterminacy. A more popular version of this attempt can be found in the "parallel grooves" of game records, where more than one set of grooves exist on the same side of a disc, each containing different material.

The silent record, or more commonly a silent section on a record, reveals the medium more than recorded sound can. A silent record is no longer a simulacrum but an empty bearer of sound; stripped of music it reveals its imperfection and vulnerability. Only the surface noise and incidental blemishes are audible, clicking and crackling. Silence on a record demonstrates the uselessness of distinguishing noise and silence from music, just as did John Cage's 4'33".

The audio industry attempts to make the listener unaware of the recording medium with an always more convincing illusion. Extended Play breaks the illusion and makes the medium visible.


1. Quoted in Experimental Music, by Michael Nyman (Schirmer Books, 1974)
2. Quoted in Liberation of Sound by Herbert Russcol (Prentice Hall, 1972).
Thinking back, or backwards, it seems that the Beatles were among the first to use backmasking as a recording technique. The whole thing revolved around the alleged death of Paul McCartney. For a couple of months, virtually every pop radio station in the country revealed new clues, supposedly planted within Beatles records that "proved" Paul was dead. For some reason, John, George, and Ringo didn't want to come right out and tell the world that Paul was dead; they turned it into an elaborate game. You might recall some of the evidence. The cover art for Abbey Road contained a wealth of "evidence." Paul was barefoot - an obvious reference to his status as a cadaver. He was out of step with the other three Beatles crossing the street. The license plate on the car to their right read '28 IF', indicating that if Paul were alive, he would be 28 years old. Disc Jockeys around the globe began playing Beatles records backwards on their shows. The best-known piece of evidence was contained (backwards) in the track "Revolution Number 9" from the album The Beatles (1968), better known as The White Album. "Number 9" is a musique concrete piece - to this day perhaps the most widely heard example of that genre. Somebody must have figured that they must have done it for some good reason - surely they couldn't have been serious about that stuff. The phrase "number nine" is repeated over and over throughout the piece. Play it backwards and it says "turn me on dead man." Sure enough, it does. To this day, I can't figure out how three syllables forward becomes five backward, but there it is. At the end of the track "I'm So Tired" on the same album, John mumbles something unintelligible. Play it backwards and it becomes "Paul is a dead man." Honest.

The Beatles, of course, issued flat out denials that Paul was dead, or that there were any backmasked messages in the records at all. A lot of records were sold as a result of it at any rate. And a lot of people took the whole thing very seriously. As a teenager in Boston, I remember watching a television special starring the high-powered attorney, F. Lee Bailey, dedicated to determining the "truth" about Paul through a thorough examination of the evidence. The iconography was laid out for viewers who could decide for themselves.

I've always had my doubts about it. If you listen to the two bits on The White Album, the clues are there, but the mirrored voices are unnatural, distorted. On the other hand, The Beatles had used backmasking two years earlier in the song "Rain." The last section of that song features a looped and reversed background effect from the vocal lines in the first part of the song. There's no doubt about this one. As the looped parts are heard forward, it's pretty obvious that what you're hearing is
topsy-turvy. On his 1976 cover of the song on the album *Faithful*, Todd Rundgren—true to the album's title—duplicates the effect precisely. The "number nine"s, however, sound completely natural as "number nine" and more than a little strange as "turn me on dead man". The bit at the end of "I'm So Tired" sounds strange any which way.

After the tremendous amount of attention focused on *The White Album*, fans began to drive themselves crazy playing their records backwards. During my investigations for this article, several people insisted that Led Zeppelin's "Stairway to Heaven" contained backmasked satanic messages. The only hidden satanic message that I could confirm however, is that when the inside illustration is held against a mirror, and thus coupled to itself, an image of the devil emerges from the rocks. Around the same time, a novelty record, "They're Coming to Take Me Away," by someone calling himself Napoleon XIV featured a b-side of the a-side played backward—from beginning to end. The song was about the singer's mental breakdown after being left by his girlfriend.

After a while, the frantic search for meaning by the 'rock and roll Panofskys' subsided. The next significant manifestation of the phenomenon came in a very upfront manner from the performance artist Laurie Anderson in the form of her tape-bow violin. Replacing the horsehair of her violin bow with a piece of prerecorded tape—and the bridge of the violin with a tape playback head—Anderson pulled the piece of tape forward and backward across the playback head, creating different phrases in each direction from the same piece of tape. The best example of the tape-bow violin is "Juanita" (1977), from the anthology *Airwaves*. The various phrases that she produces with the tape-bow all refer to the idea of no-one, or no person. Anderson was inspired to create the tape-bow violin while working in her studio. "I was playing the violin and trying to edit tape at the same time and it was the same kind of rocking motion. You know, editing tape across the tape head and then quickly going in to play and record the violin. Pretty soon you start connecting them. That was all it was." Curiously, The Beatles' first use of the technique more explore the recording studio which had begun to serve as more or less another musical instrument for them. (They retired from the stage claiming that they could no longer 'reproduce' their recordings live—a major shift in the general understanding of recording as reproducing live performance.)

For Anderson, there was no intention to slip 'secret' messages into her records. This work did make plain, however, the general working process of those who had done so and would in the future. The next time major attention was focused on backmasking in its more discrete context was in 1985 when Washington's Tipper Gore formed the Parents Music Resource Center with the intention of saving America's children from the subliminal (and the obvious) satanic influences of degenerate rock recording
Congressional hearings addressed the evil messages contained in rock records. "Rock stars" John Denver and Frank Zappa testified. Gore's stated intention was to mandate some form of censorship of rock records. Hardcore heavy metal bands including Adrenaline O.D., Grim Reaper, and Iron Maiden were alleged to have backmasked satanic messages in their records. Gore's organization commissioned the Institute for Bioacoustical Research to investigate the phenomenon. They came up with so little in the way of hard evidence that the P.M.R.C. no longer discusses backmasking at all. (Perhaps they should have hired F. Lee Bailey.)

While there are indeed backmasked messages contained in records of that time, the few confirmed examples that I could find are far from satanic. The band Cheap Trick backmasked "The Lord's Prayer" in the track "Heaven Tonite" on the album of the same name. Prince warns his listeners to prepare for the second coming in a backmasked message on the track "Darling Nikki" from the Purple Rain (1984) album. This one must have proved extremely troublesome for Gore. In its forward direction, the song introduces the title character "in a hotel lobby masturbating in a magazine". In Prince's backmasked message at the end of the track, he says: "Hello, how are you? I'm fine because I know the Lord is coming soon." After the fuss kicked up by the P.M.R.C., a lot of heavy metal bands, some of whom had been guilty of Satan glorification in the past, inserted backmasked messages designed to poke fun at Tipper. Many of them promoted the virtues of Jesus over Satan.

While it might seem that bands resort to backmasking to address only the afterlife and the "other side", a lot of recording artists use the technique for purely acoustic effect. David Bowie had his guitar player learn a riff backwards so that it could be played forward with a resulting "edge" on a track for Scary Monsters (1980). The band XTC, under the pseudonym Dukes of Stratosphear, use reversed guitar licks on a couple of songs on their Psonic Psunpsot album.

By way of final warning to the overly curious, be sure to use only belt-drive turntables for your research and to disconnect the belt when you spin those tracks backward. Otherwise your turntable will go straight to hell.

*Laurie Anderson in conversation with the author, 4 January 1988

C. Nivek welcomes any information, confirmed or not, about backmasking c/o Emily Harvey Gallery
Music is always changing, growing, and exploring. The phonograph record was for a long time merely a reproduction of a particular moment, the way a photograph is. But one hot summer night in Jamaica in the mid-1960s, something happened that would revolutionize the function of the record. Something that would make the black vinyl an instrument itself—a voice, an idea. Imagine a book or a painting that was constantly changing. The idea is sort of radical, and not such an easy leap to make. So it seems appropriate that it was discovered, like so many other great ideas are, by mistake.

By the mid-60s Jamaica had developed a profusion of mobile sound systems that regaled the captive passerby audience with the latest in popular music. These were DJ's who didn't wait for the audience to turn on the radio dial or come to the hall. They went to where their audience was, gathered the audience, literally created their audience. They played a collection of American pop and R & B, Trinidadian calypso, and the fledgling home-grown reggae.

Even the few record companies in Jamaica had sound systems patrolling the streets. The best, Studio 1, was run by an assistant named Lee "Scratch" Perry, who would later become the most innovative producer in reggae. But on that summer night Perry was just playing the usual Studio 1 sound system show, mixing favorites with new Studio 1 tapes, testing the audience with new songs. By mistake he put on a tape of a level-check, on which the rhythm is constant as various instruments are brought in and out of the mix. The audience went wild. It was an easy step from there to put out a "dub" from the song on the flip side of the record.

The effect was one of a simultaneous dismantling and rearranging of the song. It inspired a new art form, Jamaican "DJ-ing" or "toasting," which would catch on in America years later as "rapping." Suddenly any record buyer could "DJ" over the dub at home. The "toast" could be inspired by the song on side one, or it could be completely different. It could refer to everyday life, it could refer to the bible, or it might do both in the same song.

Inspired in part by Ennio Morricone, Lee Perry began to include all sorts of nonmusical noises in his dubs, such as croaking lizards, creaking doors, and bubbling water. The repetitive structure of the music reinforced the feeling that dubs didn't really have a beginning or an end, that everything could be included. Over the years some Jamaican DJ's have amassed scores of versions of the same dub, or rhythm, and they play dance halls for hours with them. DJ's may take turns rapping over a rhythm, creating different songs, yet all the same song.

One of the most sought-after slabs of vinyl is the dub-plate—the prerelease limited pressing of a new rhythm. It potentially is the prototype of a new infinity of versions, hardened vinyl at its most fluid—a test pressing available to top flight DJ's for trial runs over the local landscape.
In the early 1970s in the Bronx, N.Y., a Jamaican DJ, Kool Herc, was having trouble getting his favorite reggae songs and dubs across to the local audience. He switched to playing the percussion break on current funk records, segueing into another record before the voice came in. Then he started using two copies of the same record, segueing back and forth over the same break, creating "break beats". Soon other DJ's started using more and more unusual pieces of rock, TV or movie themes, horn breaks, voice breaks, and so on, to create rhythmic collages. He started chanting over the beats like a Jamaican toast, and hiphop was born.

Others like Grandmaster Flash started "scratching" and "phasing"--moving the needle and cueing back and forth, playing the record like an instrument. Watching Flash cut and scratch three turntables at a time is like seeing a symphony, only all the voices are vinyl.

The advent of Disco in the mid-1970s created a demand for longer songs, longer singles. The 12" single was created, at first for distribution to DJ's, then for commercial distribution. The wider grooves and size encouraged mixing, and at the same time that the B-Boys were rocking Bronx playgrounds with break-beats, Disco clubs specialized in seamless mixing. A premier Disco DJ could segue rock, funk, African and Latin beats into his mix without breaking the flow of party-time dance grooves.

These techniques of playing records influenced rapping and music as well. Long before the first rap recordings, rappers were imitating scratching with their voices. That led to the human "beat boxing" of the 1980s. This imitating of the "breakbeat" solely by mouth has developed to the point where by the mid-80s "beat boxing" imitates drum machines, transformers, whistles, and more. By the same token, synthesizers now program "samples" to sound like scratching, so that the sound now infiltrates pop charts, not only hiphop. Even video and animation isn't immune--the Max Headroom TV series being just the most prominent example.

Men imitating machines imitating men blurs the distinction between them. Paradoxically, the escalating sophistication of the technology of recording techniques enables musicians with few resources to simulate the state of the art. Hiphop 12" singles almost always include at least one dub, sometimes with up to five versions, including dope-beats, acknickulous beats, bonus beats, a cappella beats, and others. Whole albums have been issued with just drum machine beats and the admonition to "rap and scratch your own." The result is that "nuthin but beats" eleven-year-olds can simulate Run DMC or any other group they choose, by using the same microphone and turntable wizardry.

Magnus Johnstone is an artist and disc jockey on WZBC-FM in Boston.
15 COMPOSITIONS MUSICALES POUR LA RECHERCHE ET L'ENSEIGNEMENT D'UNE MUSIQUE — TOTAL —

en hommage à John CAGE

1. Posez le disque sur une table vide et regardez-le jusqu'à ce qu'il devienne intéressant (minimum quatre minutes).
2. Hésitez à l'écoute du disque (debout le disque à la main) 3 minutes.
3. Ecoutez sobrement et consciencieusement avec le plus d'attention possible le disque.
4. Eteignez le son et pendant toute la durée du disque écoutez attentivement, comme s'il s'agissait de la musique du disque, tous les bruits environnants (voitures, voix, bruits, etc.).
5. Faites le plus de bruit possible avec le disque (tappez des objets, etc.).
6. À la fin du disque enlevez l'arrêt automatique et écoutez le silence se repêter, si vous partez laissez l'appareil en marche 24 heures minimum.
7. Absence de musique et aussi musical que musique, faites l'expérience.
8. Recapitulez les circonstances qui ont amené le disque chez vous visualisez le plus de détails possibles.
9. Prenez le disque à la main et gardez-le jusqu'à ce qu'il devienne insupportable (minimum 7 heures).
10. Si vous aimez le disque, aimez-le. Si vous ne l'aimez pas, ne l'aimez pas. Comparez deux disques, un que vous aimez, et un que vous n'aimez pas.
11. Touchez le disque de toutes les façons possibles jusqu'à ce qu'il devienne intéressant (faites-le en public) 5 minutes.
12. Essuyez consciencieusement le disque, 3 minutes.
13. Ce disque en tant qu'œuvre d'art est une création de prétention, en réalité l'essence du disque est MOI, visualisez MOI, dites-vous que cela est musicale.
14. Faites n'importe quoi. n'importe comment avec ou sans le disque, mais faites-le en écoutant attentivement et consciencieusement.

CENTRE D'ART TOTAL - 32, rue Tondutti-de-l'Escarène - NICE

JE NE SIGNE PLUS
I have no objection to your using a recording of 4' 33" or a blank unrecorded tape. Instead of my writing a statement why don't you just put it on top of a copy of "Silence"?

John Cage

January 10, 1988
Leon builds a musical instrument with six automatic turntables and six blank records all playing continuously.
The sound originates from the dust particles.
This musical instrument is the composer.
It produces unpredictable sounds. It is autonomous.

Projected mode of functioning:
At first one hears the sound of the dust particles attracted in the silent grooves and the friction sound of the diamonds on the records, until an excess of dust accumulation forces the tone arms to slide on the surface of the records.
Finally the turntables mechanisms die one by one, the sextet becomes quintet, quartet, trio, duo, solo until the instrument stops performing with a final glissando.

Jean Dupuy. Aero Air, 1970
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utility, coupled with
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imply create

surprises and less than predictable changes in
the piece. I was trying to make a piece
that could be listened to and yet could be
ignored ... perhaps in the spirit of Satie who
wanted to make music that could "mingle with
the sound of the knives and forks at dinner".

In January this year I had an accident. I
was not seriously hurt, but I was confined
to bed in a stiff and static position. My friend
Judy Nylon visited me and brought me a
record of 18th century harp music. After she
had gone, and with some considerable
difficulty, I put on the record. Having laid
down, I realized that the amplifier was set at
an extremely low level, and that one channel
of the stereo had failed completely. Since I
hadn't the energy to get up and improve
matters, the record played on almost
inaudibly. This presented what was for me a
new way of hearing music—as part of the
ambience of the environment just as the
colour of the light and the sound of the rain
were parts of that ambience. It is for this
reason that I suggest listening to the piece at
comparatively low levels, even to the extent
that it frequently falls below the threshold of
audibility.

Another way of satisfying the interest in
self-regulating and self-generating systems
is exemplif
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In this case
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The cover pho
Zen For Record

A phonograph record with no sound on it.

1966

A prototype of Zen for Record was made with a blank record acquired at E.S.P. Disk Records while 14th Friedman worked there in September and October, 1966. Various versions were made with blank, empty record jackets and with painted records and jackets. The piece is an oblique homage to Nam June Paik's Zen for Film.
Heinrich Göbel

Record with blank grooves is stored in an inverted sandpaper cover
ADALOX, NORTON P80, G122
Playable at any speed
1981.
Sound effect records create a picture of a fragmented part of nature. This fragmented part of nature, as record, is a picture in place of its fragmentation.

Without distance one hears too many indiscernible things.

Sound is the space that frames an image as image from its' object.

Sound is the time of image that locates the spectator outside.

Sound is the silence of image that limits the image as finite.

Sound is the distance of image that defines dark from light.

Sound is the memory of image that dislocates the origin from it's object.

Sound is the location of image that fixes the image in time.

Jack Goldstein
THE BIRTHDAY PARTY
(S. Robinson - J. Chase - The Furious Five)

VOCAL
GRANDMASTER FLASH AND
THE FURIOUS FIVE

© 1981 Sugar Hill Records, Ltd.
Disc Design

design for random endless play record

by R.I.P. Hayman

This is a design for an endless random play record. It allows the ballistics of stylus action to create music by the disc medium itself. The sound material would be flute, voice, and drum cut onto the disc in segments. Realization of a pressable master would require the combination of a finer computer design interfaced to direct a disc master lathe with variable motion cutting head.

Once pressed the disc could be played by any turntable. Each turntable would track differently by its minute difference in skating action.

The design is based upon my work at Sterling Sound mastering studios with Robert Ludwig and CBS Records studios with Daniel Lentz. Graphic by Jujana Easterly.
In 1963-64 I used to play records both too slowly or too fast and thus change the quality of the music, thereby, creating new compositions. In 1965 I started to destroy records: scratch them, punch holes in them, break them. By playing them over and over again (which destroyed the needle and often the record-player too) an entirely new music was created - unexpected, nerve-racking and aggressive. Compositions lasting one second or almost infinitely long (as when the needle got stuck in a deep groove and played the same phrase over and over again). I developed this system further. I began sticking tapes on top of records, painting over them, burning them, cutting them up and gluing parts of different records back together, etc. to achieve the widest possible variety of sounds. A glued joint created a rhythmic element separating contrasting melodic phrases. Later I began to work in the same way with scores. I erased some of the notes, signatures and other signs, whole bars (and in this way partly determined the rhythm, if the pauses were regular), added notes and signatures, changed the tempo and so on. I also changed the order of the bars, played the compositions backwards, turned the lines upside down, put parts of different scores together, etc.

Since music that results from playing ruined gramophone records cannot be transcribed to notes or into another language (or if so, only with great difficulty), the records themselves may be considered as notations at the same time.

Excerpt from Broken Music, 1979
Multipla Records, Milano
Milan Knizak
Edition of 20, 1985
you can put each piece as a way of action for the rest of the pieces

piece No. 1
= called "music while you work"

1 person/ a gramophone/ a record/ 3 pieces of scotch tape
place the 3 pieces of scotch tape on different spots of the record expiration: the record/ music starts and the exponent has to work (i.e. clean the stage)
when the gramophone-needle hits the scotch tape, the music stumbles and the actor has to begin the record again every time
the piece is over  a) when the work is finished
b) if the record ends

several persons/ objects as named above and same preparation and all exponents have to work, i.e.: a couple is dancing/ one is making a speech/ one washes his feet/ cleaning the stage/ one comes in and goes out again all the time/ striptease/ &c.
when the music stumbles all actors have to meet at the gramophone the piece is over i.e. when the last actor has finished his work, who is ready before leaves the stage

find other versions
Peter Lardong makes chocolate records that can be played as many as a hundred times before being eaten.

MUSICAL CONFECTIONS — Peter Lardong munches one of the chocolate phonograph records he makes in the kitchen of his West Berlin home. The records can be played several times before being eaten.
Christian Marclay

When I listen to old jazz on a 78 rpm record, I experience the music without ignoring the poor quality of the recording, the background hiss or the occasional scratches. On the contrary, I enjoy these imperfections; they have become an integral part of the music. Pops and clicks from scratches, and static noise from worn grooves are sonic expressions of the time passed. The decaying record evokes a nostalgia for the original live music and its era. The limitations of early recording techniques have a unique aesthetic value, as with the black and white of old films and photographs. The record is only an illusion, an imperfect duplication of the fleeting reality of music. So why bother to make a record sound more real when I recognize it and ultimately enjoy it as an illusion?
The idea for this record began after reading "Dialogues with Marcel Duchamp" in early 1984. However, it took reading "Conversations with John Cage" to come to the conclusion that this disc really should be made. In those conversations, Mr. Cage stated that he disliked records because they did not change, the performances were stagnant.

The "POP" Record is made from a number of records from my collection and from records I found on the street in Chinatown, Boston, where I lived at the time. The only parts of the records used, however, were the spaces before, between, and after the "musical" cuts. Thus, after a number of very short bits were synced up to produce approximately four minutes of record sound, I had my starting material. This I took to a studio in the Boston area where I had an "acetate" made. The nature of acetates is that they begin to wear away after a few playings, so new "pops" and other noises will soon appear. Since this record starts out as the sound of record "pops" and surface noise, when the old noises wear away and are replaced by new ones, the record changes but does not really "get worse" for the wear. While most records begin in an "ideal" state and deteriorate, this one merely changes and evolves into a variation on itself. It is the unique quality of "acetate" that allows such a process to occur, which explains why I did not go on and have "regular" pressings made (besides the severely limited marketability of such a pleasant-sounding disc).

A side benefit of this disc is that it doesn't matter what speed it is played at, since speed differences only vary the pitch and duration of the listening experience. Initially, I thought it might be interesting to hand-scratch a bit of a score by Bach into the virgin acetate on the flip side to make another curious listening experience/pun on music, but for some reason I decided against it. However, it probably would result in, at the very least, a humorous experience, if not a damaged needle.

I performed/played/exhibited this record twice in the Boston area in early 1986 as an "intermission" to my "Maximum Electric Piano" concerts. At the moment there is only one "POP" Record/evolving, but more could be made if an individual were interested in purchasing one. Contact Roger Miller/48 Kendall St., Quincy, MA 02171
this record is a direct consequence of my immaterial drawings and reliefs, in which I try to give expression to that, which is not, or hardly to be seen, and try to draw the attention of the spectator to the existence of apparently non measurable fields of tension, which are present in the world, surrounding us. the noise, brought on this record, lies in a frequency-area, which we can't perceive in sensory perception namely from seventeen till twenty khz; the sustaining tone, which is raising with one half khz, and is continuing with intervals during five to six minutes, I experience as a line of sound-lines; I draw as it were, seven sound-lines.

artist edition, 250 pieces, signed and numbered, haarlem, 1979
Nathan is no longer concerned with the depiction of the natural subject. He scratches his automatic drawings directly onto LP's and subsequently saws out the contours. From the stereographic quality of the records he mostly uses the vinyl recordings of fairy tales made by the firm »Europa«, which are both cheap and especially easy to sawl, there remains nothing but the material, the structure and the shine of the surface. Nathan goes to sit several times a day at his small electric saw, which is something like a sewing machine, and thereby slowly assembles a diary whose individual parts he then pins loosely onto a white wall arranging them according to certain classical principles of order. That then allows the mute silhouettes to throw their shadows. The goal of his obsession: to divide into individual lots a wall or a whole room, with his bizarre forms. The gaps between the single particles guarantee a view of the individual, the separate, the communal. The fullness does not exaggerate, does not cover over. It makes the small prominent, lets it appear large in the largeness. An often disparaged medium achieves again poetic application in two senses. That the soundproducing material is now silent, can be heard and seen by the viewer. Concealed within the silhouettes are images and tones, which stand ready to recall fantasy.

Michael Glasmeier
Nam June Paik

breaking a record during his "Flux Sonata 4" in 1975 at 80 Wooster Street, New York

photo: Peter Moore
In 1980 I started making individual hand grooved, hand painted, hand printed, hand rolled, hand sprayed, hand gilded, hand scraped, one-of-a-kind visual objects. I want to take an impromptu, my artistic gesture is a clue to its grey noise. The grooveless, colorless, my basic mass produced, basic mass concept is an indication of your dedication to audio objects and transform of media, media, media. They were printed, collaged, combined. The two media, my basic mass produced.
Marko Pezzati / Leslie Stevens

Clear 7'' flexidisc, clear plastic insert (31.5 x 24.8 cm) with etched instruction: "These sounds are intended to be played at maximum levels other levels are not remotely suitable."
The composer is a(n):

academic  mathematician
accompanist mixer
acoustician musician
aesthete orchestrator
aficionado performer
annotator philosopher
anthropologist photographer
archaeologist polemicist
arbiter politician
architect popularizer
arranger post-structuralist
arranger producer
arranger programmer
arranger proselytizer
arranger psychoanalyst
conductor publicist
consumer reader
connoisseur regulator
de-disciplinarian rhetorician
designer semiotician
dilettante sociologist
director specialist
director spectator
director stage manager
distributor stylist
dj transcriber
dj translator
entrepreneur vernacularist
engineer writer
historian

Stephen Prina

A Structural Analysis and Reconstruction of MS7098* as Determined by the Difference between the Measurements of Duration and Displacement, detail, 1980-84. Phonograph record/poster
Photo: L. Lord/S. Prina

*Arnold Schoenberg: The Complete Music for Solo Piano, Glenn Gould
Side A and B of these two identical records can be played simultaneously in infinite combinations and at any speed - 78, 45, 33 or 16 rpm.

250 double copies of this record were made. 20 were packaged in a box designed by Farhi, to whom this work is dedicated. 200 copies were signed & numbered.

Paris 1969
an archaeology of sound
a time of light and smoke
sound shapes purged, set adrift
p'rraps to set in yr. memory
a year from now you might hear me-
going around in yr. head

hold me in yr. memory
keep me in mind
something touches me, and touches you
hold that feeling.

lee ranaldo 1987
LOU REED

Metal Machine Music
1975

NOTATION—When I started the Velvet Underground and it's various springoffs, my concern was not, as was assumed abidingly lyrical, verbally oriented at heart, 'head' rock, the exploration of various 'taboo' subjects, drugs, sex, violence—REALISM—realism was the key. The records were letters. Real letters from me to certain other people. Who had and still have basically, no music, be it verbal or instrumental, to listen to. One of the peripheral effects, typically distorted, was what was to be known as heavy metal rock. In Reality it was of course diffuse, obtuse, weak, boring and ultimately an embarrassment. This record is not for parties/dancing/background, romance. This is what I meant by "real" rock, about "real" things. No one I know has listened to it all the way through including myself. It is not meant to be. Start any place you like. Symmetry, mathematical precision, obsessive and detailed accuracy and the vast advantage one has over "modern electronic composers." They, with neither sense of time, melody or emotion, manipulated or no. It's for a certain time and place of mind. It is the only recorded work I know of seriously done as well as possible as a gift, if one could call it that, from a part of certain head, to a few others. Most of you won't like this, and I don't blame you at all. It's not meant for you. At the very least I made it so I had something to listen to. Certainly Misunderstood; Power to Consume (how Bathetic); an idea done respectfully, intelligently, sympathetically and graciously, always with concentration on the first and foremost goal. For that matter, off the record, I love and adore it. I'm sorry, but not especially, if it turns you off. One record for us and it. I'd harbored hope that the intelligence that once inhabited novels or films would ingest rock. I was, perhaps, wrong. This is the reason Sally Can't Dance—your Rock n Roll Animal. More than a decent try, but hard for us to do badly. Wrong media, unquestionably. This is not meant for the market. The agreement one makes with "speed." A specific acknowledgement, A to say the least, very limited market. Rock n Roll Animal makes this possible, amusingly enough. The misrepresentation succeeds to the point of making possible the appearance of the progenitor. For those for whom the needle is no more than a toothbrush. Professionals, no sniffers please, don't confuse superiority (no competition) with violence, power or other justifications. The Tacit speed agreement with Self. We did not start World War I, II, or III. Or the Bay of Pigs, for that Matter. Whenever. As way of disclaimer, I am forced to say that, due to stimulation of various centers (remember OOOOHHHHMM, etc.), the possible negative contraindications must be pointed out. A record has to, of all things Anyway, hypertensive people, etc. possibility of epilepsy (petite mal), psychic motor disorders, etc., etc., etc. My week beats your year.
I have been releasing records of my music for a decade now. I started simply due to the fact that I did not particularly care for any of the music available to me at the time and so I felt compelled to create my own. The only instrument I had mastered at the time was imagination. Now, I'm solely dependent on it, having no knowledge whatsoever of instruments or anything else related to the creation or performance of music. To this day I cannot read a single note of music or play any traditional instrument. As soon as I had decided I wanted to release records, I also knew I wanted to exploit whatever possibilities might exist for playing with the format. Instantaneously, my head began to fill with ideas; in five or six minutes I had generated more ideas than I will probably be able to apply. My output so far represents a very small fraction of some of those possibilities, a few that seem to me the most interesting or fruitful. Although I haven't made use of alternative formats in my last several recordings, I haven't abandoned them - they continue to fascinate me, because instead of saying something to the listener, they show something to the listener. There is obviously a big difference about the two and I have always been aware of that difference and always endeavor to reflect that awareness in what I do. I try to make music into something to experience rather than just something to listen to. And the use of alternative format has been only one aspect of that intent.
WERNER SCHMEISER/FEDO ERTL

Schmuck ist eine Sprache, 1984

12 inch record, one sided with only 1:07 minutes of recorded material, artist edition of 70.

Translation of the 1:07' text on the record:

ejewelry is a language
21 22 23 24 25
jewelry is still the same
the small is the great in jewelry
language of material
sound of gold
jewelry-sculpted thought. It does not need any explanation
to handle-to go around
jewelry is a position towards life
jewelry i am doing now
the diamond of the tone arm jewels the groove
jewelrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrrryyyy may be dangerous to your health
look ladies and gentlemen
jewelry is at the nerve center
The record is divided in 2.
The music is divided in 2.
The listening ("Lisztening") is divided by 1 into 1.

0 = 0

Keep counting.

Stuart Sherman
Martin Turner, Ecliptic Rhythm, 1982

On the single circular groove of a plexiglass record, the stellar positions of the birth are noted, then scored or scratched into sound events. When played on a record player a special rhythm is heard, cyclically repeated, but different with every person. Kepler's ideas towards a world harmony, which expression can be found in the regular polygons, made by dividing the circle with the cardinal numbers (musical intervals—as in mathematics—also refer to these) are extended here by the rhythm. It is important that, not only the main aspects matter, but that every angular distance is incorporated in the sound event; modified and differentiated in sound merely through the character of the planet and its position and dependency in the matrix. On the print of the record (erasing) one can follow up visually these modifications.
The title 'you see we come as friends' appeared as one of 16 titles on 8 mini-records, together with a battery operated phonograph in a box called 'Chöre & Soli'. It was released by 'Gelbe Musik', Berlin and 'Pure Freude' Düsseldorf 1983.

Mini-records and their respective phonographs are usually components of talking dolls and laughing sacks.

After Die Tödliche Doris had released a 12 inch and a LP, she began to get bored. One LP follows the other and then the comparison starts. The criticspeak of the 'development' of the group in this or in that direction, guarantying the new release a positive development ('the music has become more elaborate and more thoroughly composed'), or a negative one ('sadly the strength of the first LP is lacking'). Through the format of 'Chöre & Soli' this couldn't happen. Towards the independence from records and phonographs, as in our LP's 'Unser Debut' and 'Sechs' and equally through a third immaterial LP (order the poster 'Throw away your crutches!' from Die Tödliche Doris, Lützowstr. 23, D-1000 Berlin 30), an important contribution was achieved. Don't worry!

Die Tödliche Doris
regular sandpaper discs are played in sequence so that the different gradations (40, 50, 60, 80, 100, 120, 150, 180, 220, 240, 280, 320, 400, 420,...) are synesthetically transformed into total music. these sandpaper (mono-) records can be played on a modern record player with a light tone-arm. keep the records and stylus free of dust!
PHONO RECORDS

The string record was made for an exhibition called "Rope & String" at the Janis Gallery in 1970.

Earlier, in 1960, I had used a red Beethoven record in a kinetic sculpture, and in 1964 I made a series of spray painted records for a Fluxus performance at the Flux Stone on Canal Street. These were played by the audience and as the paint wore off the music gradually was revealed.

During the period 1970-72 I began experiments with the manufacture of a series of records in different materials such as metals, plastic, wood, clay and latex. Most of these were made on a machine lathe at Rutgers University, and I thought of them as being sound portraits from this machine. The various bands on these records were varied in depth of cut, spacing, and rpm. I was interested in variations in the sounds produced in this manner from the varied materials.

Bob Watts
January 8, 1988
Our music has always been very much involved with the medium of time, and in particular with extended duration time structures. In addition to presenting live performances continuously for several hours at a stretch, we liked to listen to tapes of our bowed gong music at one-half and one-quarter speeds. This was easy to do with tape recorders, and of course, in addition to incredible low frequencies, and the transposing of harmonics down into a lower, more accessible range of hearing, the music became twice and four times as long, respectively. The astonishing harmonic spectrum of the bowed gong, which at normal speed created images of airplane flight, and at half-speed conjured up the aural sensation of being in the depths of the oceans, seemed at quarter-speed to transport the listener through outer space where one could actually hear the auditors churn. In 1969, record mastering engineers did not want to put more than about 22 minutes on one side of a 33 1/3 rpm LP. This slice of time could represent only a fragment of our actual performances, and was one of the reasons we were not so anxious to release our music on record. In those days, however, turntables usually played at several speed settings from 78 down through 33 1/3, and often included 16 2/3 rpm. We decided that the bowed gong would be ideal for Side 2 of our first record release because by specifying that it could be played at any constant slower speed we could beat the time limitation imposed by the LP recording medium. Of course, we had always hoped that someone would make a turntable that would play at even slower speeds than 16 2/3 to get the full benefit of our release.

The reference 78'17" in the title of this album refers to the length of time on the record, a total of seventy-eight minutes and seventeen seconds. By 1973, it seemed that a new breed of mastering engineer was beginning to develop in response to the demands of new music. When we took our music to Paris to be mastered for the Shandar disc, we wondered how much we would have to excerpt our tapes to fit the music on the LP sides. To our surprise, mastering engineer Michel Blancvillain wanted to try to fit over 39 minutes on each side, and this before Direct to Metal Mastering (DMM) had even been invented. In the liner notes we wrote: "By 1982 La Monte had formulated the concept of a Dream House in which a work would be played continuously and ultimately exist in time as a 'living organism with a life and tradition of its own.' Time is so important to the experiencing and understanding of the music on this record that we have made every effort to utilize the latest sound recording technology in order to have the duration of the music on the disc as long as the music on the original master tapes. We would like to thank M. Michel Blancvillain for his engineering foresight and expertise. He encouraged us to achieve the remarkable durations on this record, and cut the master disc at his studio, Magnum International, in Paris."

In 1987, in order to release the five-hour and one minute recording of The Well-Tuned Piano on five LP discs we had the even more difficult challenge of piano music with an extraordinarily wide dynamic range, from total silence to thunderous bass. We did not want to have more than five discs so that there would be only ten side changes which required us to put an average of over 30 minutes on a side. Additionally, we tried to make each side break as musical as possible in a work that was five hours and one minute continuous and was never intended to be chopped up at all. What had been unexpectedly possible with the fairly constant levels of the Dream House disc, was apparently much harder with The Well-Tuned Piano. But with Direct to Metal Mastering we were able to achieve 34 minutes and 34 seconds on the longest LP side. Bob Ludwig of Masterdisk said it would have never been possible without DMM and that we were stretching the technique to its limits.
Ingve Zakarias is a Norwegian artist living in Berlin whose medium is the wood cut. Recently Zakarias decided to sometimes hold back from printing the engraved wooden plates. The printing plate itself becomes an independent artistic manifestation, a wood relief with defined qualities. The type of wood, its grain, color, texture, size and thickness are added up to the figurative or abstract expression of the engravings.

Zakarias’ records have their origin in this handling of the wood as a material. Zakarias reduces the record to its basic visual elements: the spiral, the hole, LP size, two sided. Only the outer round shape is ignored. For that reason the wood relief is only an image. The acoustic experience remains in the artist studio, tied to the moment of the artistic process, when the hand armed with the gouge engraves the spiral into the wood. The ingeniously perfectionated mechanics of the record player with its fine needle is replaced by the engraving hand of the artist.

Michael Glasmeier

Lumberjack Song, 1986
<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>1861</td>
<td>Léon Scott's phonotaugraph transcribed sounds onto a disc covered with lampblack.</td>
</tr>
<tr>
<td>1877</td>
<td>Charles Cros deposits a paper with the Académie des Sciences, describing a process of recording and reproducing sound.</td>
</tr>
<tr>
<td>1877-1896</td>
<td>Thomas Edison and Emile Berliner independently develop and patent the cylindrical and disc phonograph systems.</td>
</tr>
<tr>
<td>1894</td>
<td>The first gramophone records, then called &quot;plates&quot; are seven inch and single sided, with a playing time of 2 minutes.</td>
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<tr>
<td>1904</td>
<td>ODEON issues the first double-sided records. Neophone Company in London issues the first &quot;long playing&quot; records, these single-sided twenty-inch discs played from eight to ten minutes.</td>
</tr>
<tr>
<td>1908</td>
<td>Edison introduces the four-minutes Amberol cylinder.</td>
</tr>
<tr>
<td>1919</td>
<td>In Blaise Cendrars' novel &quot;Dan Yack&quot;, the protagonist is described playing half a dozen crank-up phonographs all at once.</td>
</tr>
<tr>
<td>1920</td>
<td>Experiments by Moholy Nagy at the Bauhaus in which records were played backwards, scratched to alter rhythms, or cut in their grooves so as to produce a howling &quot;glissandi&quot;. He also proposed to inscribe by hand grooves on a large disc of about 5 meters in diameter, which would then be reduced by a photomechanical process so it could be played on a regular turntable.</td>
</tr>
<tr>
<td>1922-1927</td>
<td>Darius Milhaud experiments with vocal transformation by phonograph speed change.</td>
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<tr>
<td>1924</td>
<td>Ottorino Respighi calls for a phonograph recording of nightingales on his &quot;Pini di Roma&quot;.</td>
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<tr>
<td>1925</td>
<td>First commercial success of a record (Let it Rain, Let it Pour).</td>
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<tr>
<td>1926</td>
<td>At the Chamber Music Festival in Donaueschingen it is proposed that recordings can be used as creative tools for musical composition.</td>
</tr>
<tr>
<td>1929-1930</td>
<td>Paul Hindemith and Ernst Toch experiment with phonograph techniques at the Rundfunkversuchsstelle, Staatliche Hochschule für Musik, Berlin.</td>
</tr>
<tr>
<td>1931</td>
<td>RCA Victor demonstrates a long-playing 33 1/3 rpm record.</td>
</tr>
<tr>
<td>1936</td>
<td>Edgard Varèse experiments with phonographs that could be operated backward and at variable speeds.</td>
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</tbody>
</table>
1939  John Cage records his "Imaginary Landscape No. 1". The work calls for muted piano, cymbal and two variable-speed turntables playing Victor test recordings of mixed and variable frequencies.

1942-1944  American Federation of Musicians imposes nationwide recording ban.

1944-1950  Paul Boisselet experiments with disc and tape procedure.

1947  Magnetic tape recording comes into limited use in Europe and America.

1947-1955  Tristam Cary experiments with disc manipulation.

1948  Pierre Schaeffer inaugurates "Musique Concrète". At the "Maison de la Radio" in Paris he made his own disc recordings using bits and pieces of noise and musical sounds from the vast collection of records at his disposal.

1948  Columbia Records introduces the microgroove 33 1/3 rpm record with a playing time of 23 minutes per side, called LP record.

1949  RCA Victor introduces the seven-inch 45 rpm record.

1949  Pierre Schaeffer inaugurates "Musique Concrète". At the "Maison de la Radio" in Paris he made his own disc recordings using bits and pieces of noise and musical sounds from the vast collection of records at his disposal.

1952  Cage arranges the first "happening" at Black Mountain college, during which Robert Rauschenberg played an old hand-wound gramophone.

1975  Club DJ Kool Herc rather than play a record straight through, would play the same instrumental break several times over, "cutting" from one record player to the other. Soon after another DJ called Grand Wizard Theodore invented the technique called "scratching". This involves rapidly spinning a record back and forth while keeping the needle in the groove to repeat a single beat.

1976  First 12" singles, also known as E.P.'s (extended play) with various mixes of the same song on B-side. The first commercially available was "Double Exposure" by Ten Percent (Salsoul).

1979  The first digital Compact Disc (CD).

Chronology compiled by Christian Marclay from:

"The Fabulous Phonograph" by Roland Gelatt
"The Liberation of Sound" by Herbert Russcol
"Noise" by Jacques Attali
"Experimental Music" by Michael Nyman
"Cut'n'mix" by Dick Hebdige
"Dan Yack" by Blaise Cendrars
Essay by René Block in "Ecouter Par Les Yeux", catalogue Musée d'Art Moderne de la Ville de Paris, 1980
DISCOGRAPHY

The following terms are recording industry terms used to describe various physical characteristics of sound recordings used by master cutters. The source of this information was supplied to ARChive by Andy Van Dette at Master Disk.

**Lead-in:** The blank space at the beginning of the record.

**Lock groove:** A locked or closed repeating band within the body of a record where one must manually advance the tonearm/needle forward to hear the remainder of the record.

**Lead out:** The blank space and wide spiral groove at the end of the record.

**Lock-out:** The final lock groove at the very end of the record where the stylus rests or rejects.

**Modulation in the lock out:** Those cases where the lead-out and lock-out groove are not silent, but contain sound and result in a repeating loop effect.

**LOCK GROOVES.** (The following examples are of lock grooves with sound modulation).

Partial listing:

**SERGEANT PEPPER’S LONELY HEART’S CLUB BAND.** The Beatles. (First pressings, Parlophone/EMI, 1967) Lock groove at end of side two. Maybe the first (voluntary) lock groove?

**YER ALBUM.** James Gang. (ABC, 1969) At end of one LP, there is a voice saying “Play it again, buy another copy” or words to that effect.

**CAMEMBERT ELECTRIQUE.** Gong. (Virgin/Caroline, 1971, LP) Side A has repeating “vacuum cleaner sound” Side B has voice repeating “Gong. Gong. Gong...”

**METAL MACHINE MUSIC.** Lou Reed. (RCA, 1975) Double LP. Lock groove at end of side 4.

**TAKING TIGER MOUNTAIN BY STRATEGIE.** Brian Eno. (Island Records) Locks at end of side 2.

**SOUND TRACKS 1.2.3 / MODE OF INFECTION/KNIFE LADDER.** Boyd Rice (NON). Artist pressing, 1979. 7” single sided with two center holes, can be played at 16, 33, 45 & 78. The three SOUNDTRACKS are single lock grooves.

SONGS FOR SWINGING LARVAE. Renaldo & the Loaf. (Ralph Records, 1981, LP) Side one ends with repeating "Boom, Boom, Crash, Crash" which then picks up at beginning of side two.

ESCALATOR OVER THE HILL. Carla Bley/Paul Haines (JCOA Records, 3LP) Lock at end of side 3.


DEVIL'S MUSIC. Nicolas Collins. (Trace Elements Records, 1985) Locks at end of side 2 with a violin loop.

M-M-M-MANHATTAN. Sonic Architecture. (Black Market Records, 1984) "Bonus Siren" repeating fire engine siren at end of side A.

FROM HERE TO INFINITY. Lee Ranaldo. (SST, 1987, LP) Available on clear or grey vinyl, 45 rpm. Each song ends with a lock groove. One must manually move the needle ahead for each song.

PARALLEL GROOVES. (Where there are more than one set of grooves on the same side of a disc containing different material).

Partial listing:


HORSE RACE. Mason Williams Co, Chicago, 1945. 12", 78 rpm. "Which horse wins! No matter how often you play it, never will you be sure of the winner."

HORSE & AUTO RACE GAME. Announced by Henny Youngman. (Urania Records circa 1950) Five grooves on each side.

MYSTO MAGIC. The Wizard Record. (Belda Trade Mark, circa 1950) "What will it play?"
CHARMIN' CHATTY. Doll record. Mattel Inc. 1962. 2 5/8". 5 grooves on each side.


YOU'RE THE GUY I WANT TO SHARE MY MONEY WITH. Laurie Anderson, William Burroughs, John Giorno. (Giorno Poetry Systems Records, 1981) Side 4 has three grooves, one for each artist.

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VARIOUS SPEED. (Records that can be played at different speeds)

Partial listing:

CE DISQUE 45 TOURS PASSE EN 78 TOURS EST UNE CREATION MUSICALE. Ben Vautier. In artist edition book: "Ben Dieu", circa 1962. (This 45 rpm record played at 78 rpm is a musical creation).

WOW. Moby Grape. (CBS/Columbia, 1968. There are two rpm on side 2 which locks in the middle of the side and the needle must be picked up and moved forward, and the speed must be changed to 78 rpm.

A-B-A-B. Eliane Radigue. Two identical 7" records that can be played simultaneously or not and at any speed. 1969

LA MONTE YOUNG/MARIAN ZAZEELA. Edition X, 1969. "Playback at 33 1/3 rpm, however this side may also be played back at any slower constant speed down to 81/3 rpm."


MODE OF INFECTION/KNIFE LADDER. Boyd Rice. Playable at any speed. See Lock Grooves above.

PAGAN MUZAK. Boyd Rice. Playable at any speed. See Lock Grooves above.

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SILENCE. (Records with blank grooves, recorded silence, etc.)

Partial listing:

4' 33''. IN THREE PARTS: 30''/2' 23''/1' 40''. John Cage. (Nova Musicha #1/ Cramps, 1974).