


NPR: TechnoPop: The Secret History of Technology and Popular Music, Gennett Records - Mic...


n p r TechnoPop, Part One: Gennett Records



Starr Piano Company/Gennett Records

An undated aerial view of Starr Valley - the name locals gave the sprawling factory, which filled much of the gulch near Richmond, Ind.

Photo: Starr-Gennett Foundation, Inc.

1 of 11 

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Bix and his band

Bix Beiderbecke (second from right, playing the cornet) recording a jazz number with his band at Gennett Records. Beiderbecke was a contemporary of Louis Armstrong, and is considered one of the pioneers of jazz music.

Photo: Duncan Schiedt/Starr-Gennett Foundation, Inc.

 2 of 11 

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Hoagy plays at Gennett

A jug-eared hopeful songwriter named Hoagland Carmichael (third from right) from nearby Bloomington, Ind. came to Gennett Records in 1927 to record "Star Dust," which went on to become an American classic.


Photo: Duncan Schiedt/Starr-Gennett Foundation, Inc.

3 of 11

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An independent company

In this undated photo, Gennett Records employees pose in front of the administration building of the Starr Piano Company. Gennett Records never really built on its early success, although the firm did very well by pressing records for other labels. There's still a large CD-pressing plant at the edge of Richmond, Ind. -- a direct descendant of Gennett.

Photo: Starr-Gennett Foundation, Inc.

4 of 11

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Destination for jazz pioneers
The New Orleans Rhythm Kings also recorded at Gennett.
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Gennett veteran Sam Meier
Former Gennett Records employee Sam Meier visits the site of the company's historic recording studio in Richmond, Ind.
Photo: Rick Karr, NPR News


[Sam Meier reminisces about the Starr Valley and Gennett Records.](#)

6 of 11

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The ruins of Gennett Records

Ruins of the Gennett Records pressing plant and Starr Piano Company keyboard manufacturing facility.

Photo: Rick Karr, NPR News

7 of 11

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The ruins of Gennett Records

A late-19th century smokestack is all that remains of the Starr Piano Company's power plant.

Photo: Rick Karr, NPR News

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Relics of the past

Former Gennett Records employee Sam Meier holds a test pressing he saved from the scrap heap. There were no surviving copies of the record -- a 1920s-vintage blues number called "Group of Brown-Skinned Women" -- until Meier discovered this test pressing in his collection.

Photo: Rick Karr, NPR News

[Sam Meier explains the hazards of manufacturing 78 rpm records.](#)

9 of 11

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Relic of the past

The test pressing of "Group of Brown-Skinned Women." It's the world's sole surviving copy of this historic 1920s blues recording, made at the Gennett studio in Richmond, Ind.


Photo: Rick Karr, NPR News

10 of 11

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Past meets the future

A 1920s-vintage Gennett Records logo on the side of the company's ruined warehouse building in Richmond, Ind. The record label helped define the relationship between technology and popular music; a local graffiti artist has added the name of British pop band Depeche Mode, which helped define a technology-obsessed genre of music known as technopop.

Photo: Rick Karr, NPR News


🔍 [Sam Meier explains the significance of the faded logo.](#)

🔍 11 of 11

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Playback without Electricity

An Edison flywheel cylinder player in antique phonograph collector Peter Dilg's Baldwin, N.Y., shop.

Richard Koprowski of the Stanford Archive of Recorded Sound and James Lastra of the University of Chicago explain that early audiences of the phonograph couldn't distinguish between the sound of a phonograph and that of live performance. Early phonograph listeners didn't have the [modern listener's frame of reference](#).

Photo: Rick Karr, NPR News

1 of 7 🔍

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Recording without Electricity

The Edison lathe with the 24-inch tin recording horn attached. A singer, musician or band had to play loudly into the metal horn. From there, the sound waves vibrated a thin membrane, which in turn caused a needle to inscribe wavy grooves on the rotating cylinder of wax.


Photo: Rick Karr, NPR News

2 of 7

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Old vs. New

Old meets new: NPR audio engineer Neal Rauch uses a sensitive microphone to record any sound that might "leak" from the stylus on the Edison lathe during recording.

Photo: Rick Karr, NPR News

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Putting it to the Test

NPR's Rick Karr reads part of his script into the Edison recording horn while NPR audio engineer Neal Rauch records the same audio on a modern digital recorder.

Listen to the voices of Karr and antique phonograph expert Peter Dilg as heard on *Morning Edition*:

- [From the wax cylinder](#)
- [Recorded onto digital audio tape](#)

Photo: Rick Karr, NPR News

4 of 7

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The Finished Product

After recording on the Edison device, the cylinder is furry with wax shavings.

Photo: Rick Karr, NPR News

5 of 7

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'Der Bingle'

A publicity shot of Bing Crosby from the late 1920s or early 30s.


Gary Giddins, author of the Bing Crosby biography *A Pocketful of Dreams: The Early Years, 1903-1940*, discusses Bing Crosby's childhood fascination with the phonograph, [and the effects it had on Crosby's singing](#).

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The Disk vs. the Cylinder

Richard Koprowski of the Stanford Archive of Recorded Sound with an acoustical Edison disc player. Volume control on this mechanical device was provided by a fuzzy ball that could be shoved into the playback horn to reduce volume or removed to allow full volume.

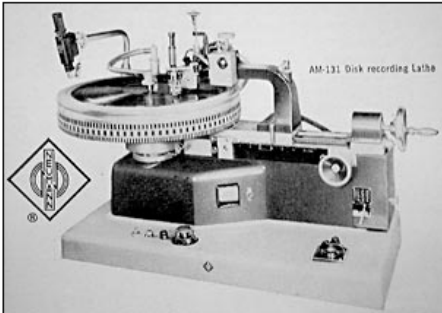
Pull the cable, and the ball pulls back out of the horn, allowing sound to pass. Push the cable in, and the ball stuffs into the narrow part of the horn, [muffling the sound](#).

7 of 7

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AM-131 Disk recording Lathe

State of the Art?

A recording lathe -- the only reliable way of recording sound prior to the introduction of the tape recorder in the late 1940s. At the time, this device was state-of-the-art, but worked on the same concept as the first gramophones that had been built 70 years before, engraving sound waves directly onto wax.

Crosby biographer Gary Giddins explains why the first solution Crosby tried when he started recording his radio show in advance -- [was an inferior way of recording music.](#)

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German Ingenuity


German engineers built the "magnetophon" shortly before World War II by improving upon a number of existing magnetic recording techniques.

2 of 7

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John A. "Jack" Mullin

Audio engineer and ex-GI John A. "Jack" Mullin with his tape machines in the ABC studio where he started taping Bing Crosby's radio show in 1947.

Gary Giddins talks about the impact that Bing Crosby's [decision to pre-record his radio show](#) had on the entertainment industry.

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The First Ampex Machine

The Ampex Model 100 -- the first U.S.-made magnetic tape machine. Its development was funded in part by Bing Crosby.


Magnetic tape recording pioneer John A. "Jack" Mullin [relates an anecdote about the early days of tape](#): He stunned Bing Crosby's announcer, Ken Carpenter, by removing the letter "s" from a commercial that Carpenter had read during the show, thus saving Carpenter from having to record the ad again. Carpenter was so impressed, he carried the tiny scrap of tape with him for months.

⏪ 4 of 7 ⏩

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The Last Ampex Sign

Tape recorder manufacturer Ampex Corporation, along with Hewlett-Packard, helped establish the suburbs south of San Francisco as a haven for high-tech businesses -- today's Silicon Valley. Ampex got out of the tape-recording business in the 1980s. Today, all that's left of its once-sprawling presence is this sign at the side of U.S. 101 in Redwood City, Calif.

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Visions of the Future


Bing Crosby and Jack Mullin watch the first experiments with another technological innovation on which they collaborated, and which helped change the world of entertainment again -- the videotape recorder.

⏪ 6 of 7 ⏩

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Silicon Valley Visionary

Crosby, pictured here singing to a radio show audience in 1939, was "king of all media" well before Howard Stern took that title. Films, records and radio shows, Der Bingle was one of the top-grossing world celebrities for decades. And through the magic of technology, he hardly ever had to perform live.

[Listen to the opening of Bing Crosby's Oct. 4, 1947, ABC radio show](#) -- the first tape-recorded show in U.S. radio history.

7 of 7

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Sonic Pioneers

Decca Records producer John Culshaw (far right) pioneered some of the sonic possibilities of LP records and tape recording. He's joined by composers Benjamin Britten (center) and Peter Pears.

While the very first LP records sounded "awful," incremental improvements to the technology quickly made for true high fidelity, according to Elektra Records founder Jac Holzman. He describes two of them -- [the thermal cutting stylus and variable pitch recording](#).

1 of 5

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Studio Magic

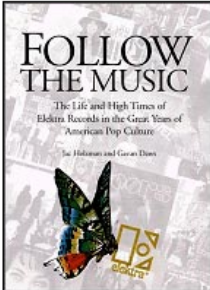
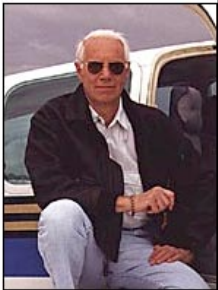
Chicago recording engineer and producer Steve Albini at the controls of his Chicago studio, Electrical Audio. Albini says that in the 1960s, the music business was on the cusp of abandoning a fundamental tenet that had held for nearly a century. "In even its simplest sense, a recording means that you are making a permanent record of an event. You're not necessarily creating a sound moment that will be used to frighten children and startle the listener. You're making a recording of a performance." That relationship, he says, was about to change.

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An Original Starmaker

Jac Holzman, founder of Elektra and Nonesuch records, is also an avid pilot. Jac Holzman's autobiography, *Follow the Music*, recounts the early days of independent record labels and how LP technology and FM radio led to a huge profusion of new, varied music styles. Holzman gave Judy Collins, The Doors and Queen -- among others -- their first record contracts.

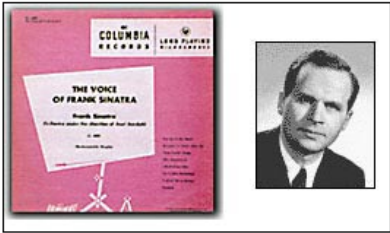
Holzman says one aesthetic effect of the LP record was much longer songs. Some artists on his label took advantage of the format by recording [songs that lasted for an entire 20-minute side](#).

⏪ 3 of 5 ⏩

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LP Trailblazers

CBS engineer Peter Goldmark (left) was lead developer on the LP record. At right, the cover of one of the first LP records -- a recording by Frank Sinatra.

Where it leads to: Hear an ad for a late-'60s [concert by the Grateful Dead](#) on Los Angeles underground FM station KMET.

Jac Holzman says even during the rise of FM radio, AM stations remained important, especially to artists who wanted to sell a lot of records. He describes a novel approach to make sure the label's singles [sounded good on car radios](#).

⏪ 4 of 5 ⏩

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FM Radio Days

Disc jockey B. Mitchel Reed in his AM radio days. A few years later, he had a moustache and long hair, and worked at the top FM station in Los Angeles.

Reed, on Los Angeles FM station KMET, comments on a late-60s magazine article about Mick Jagger in which the Rolling Stones singer says he'd "[rather be dead than sing 'Satisfaction' when I'm 45.](#)"


The sound of underground FM: This [ad for Los Angeles shop Leather Ltd.](#) aired on KMET in the late '60s.

⏪ 5 of 5 ⏩

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Ahead of His Time

Guitar virtuoso and studio technology pioneer Les Paul in his home workshop, circa early 1950s. Note the Ampex tape machine in the foreground.

Listen to the opening of a 1949 Les Paul Show on NBC Radio. Les demonstrates -- with some help from his wife at the time, vocalist Mary Ford -- [the kind of guitar magic he could perform with one Ampex tape deck.](#)

1 of 6 

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Sidney Bechet


Pioneering jazz clarinetist and soprano saxophonist Sidney Bechet played six instruments (clarinet, alto and soprano sax, bass, piano and drums) on a 1941 novelty recording of "The Sheik of Araby."

 2 of 6 

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Dave Lebolt


Dave Lebolt is vice president in charge of product design for San Francisco-area software firm Digidesign, which created ProTools, a program that can turn a home computer into a multitrack recording studio -- complete with outboard effects -- for under \$1,000.

3 of 6

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ProTools Tracks

Digidesign's ProTools LE software allows a home computer to emulate a multitrack recording studio. Here, some screen shots of music recorded by Box Set Authentic, the band in which NPR's Rick Karr plays. The wavy colored lines represent the sound that's recorded on each of the program's "virtual" audio tracks, which are mixed together to create a final, finished track.

4 of 6

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Steve Albini

Recording engineer and producer Steve Albini (Bush, Nirvana, Robert Plant and Jimmy Page) at the helm of his Chicago studio, Electrical Audio. While Albini makes use of multitrack recording and outboard effects, he believes many musicians are overawed by technology -- and feel compelled to overproduce their studio output.

Albini says today's studio effects are so powerful, they can correct mistakes. But sometimes, he says, [mistakes are what makes music worth listening to.](#)

5 of 6

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Les and Mary

While vocalist Mary Ford listens, Les Paul tweaks a knob on his recording studio's console to change the sound of one of the tracks on a tune.


Chicago recording engineer and producer Steve Albini says advances in electronics have given musicians and engineers many more options, and the electronic components themselves get smaller every year. But all that technology, Albini says, frequently [distracts from the main point of music, which is the music itself.](#)

6 of 6

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Rock Closet


Elizabeth Sharp of the band Ill Ease sits behind the drum kit in the "Rock Closet" -- the 6-by-8-foot studio in her Brooklyn loft apartment. [She can record whenever inspiration strikes](#). Instead of paying the owner of a professional studio a rental fee for a session of limited duration, she has access to recording equipment 24 hours a day.

1 of 8 

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ProTools


Elizabeth Sharp launches a program called ProTools on the Apple Macintosh computer that serves as the nerve center of her home studio. The blue box to the right of the computer monitor converts the sound generated in the studio into the ones and zeroes that the computer stores. [The biggest advantage of digital recording](#) over analog or tape-based recording is the "undo" button, Sharp says.

 2 of 8 

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Active Recording Session

An active recording session in the program ProTools. The colored bands of squiggly lines represent the individual tracks recorded on the computer.

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Steve Albini

Chicago recording engineer and producer Steve Albini says the rapidly falling price of professional recording equipment has led to "the triumph of the amateurs." Culturally, Albini says, that's been democratizing, empowering and valuable. Aesthetically, he says, it has led to a lot of poor-sounding recordings [as musicians experiment with equipment](#) without a basic knowledge of audio engineering.

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Studio-In-a-Box

A "studio-in-a-box" by the Japanese manufacturer Tascam. When these devices hit the market in the early 1980s, they gave musicians the ability to experiment with multitrack recording at home. The sliders at the left control the balance between the four tracks recorded on the cassette at right. The technology was immensely popular with musicians during the '80s and early '90s, and helped lead to a boom in semiprofessional musicianship. It has been rendered largely obsolete by advances in computer recording.


Photo: Courtesy of DJ Ginsu

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Guided by Voices

Dayton, Ohio, band Guided by Voices (here in a 2001 promotional photo) recorded much of its critically-acclaimed album *Bee Thousand* on a four-track cassette machine. It remains a seminal example of the "Lo-Fi" movement in rock and hip-hop that sprang up around the inexpensive technology.

Photo: www.guidedbyvoices.com

⏪ 6 of 8 ⏩

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Dave Lebolt


Dave Lebolt of digital music firm Digidesign, which created ProTools software. Lebolt says his firm's product and a score of competing products are "word processors for sound."

7 of 8

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Roger Linn

Songwriter, session guitarist and inventor Roger Linn in his Berkeley, Calif., home, playing through his latest invention -- the AdrenaLinn -- which turns the sound of a guitar into that of a whole band. Linn says technology helped give birth to the record industry. Now, he says, easily accessible technology is destroying that industry -- and he thinks that's great.

8 of 8

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