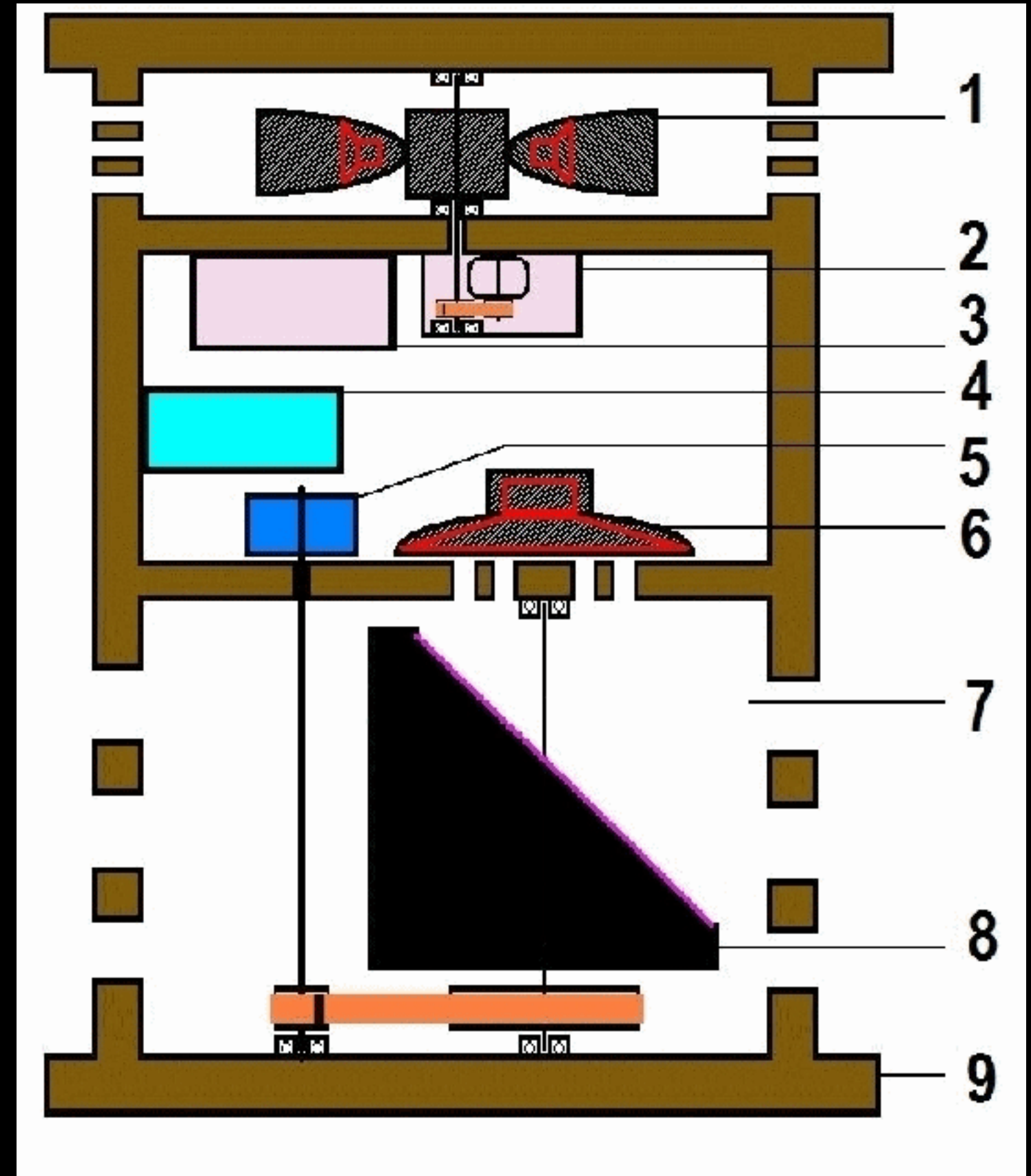




INNOVATIONS IN ROCK MUSIC

LESLIE SPEAKER

Directs the speaker's sound to create tremolo effects.



UNI-VIBE

Simulates the sound of a rotating speaker's sound to create tremolo effects.



THE 1960s

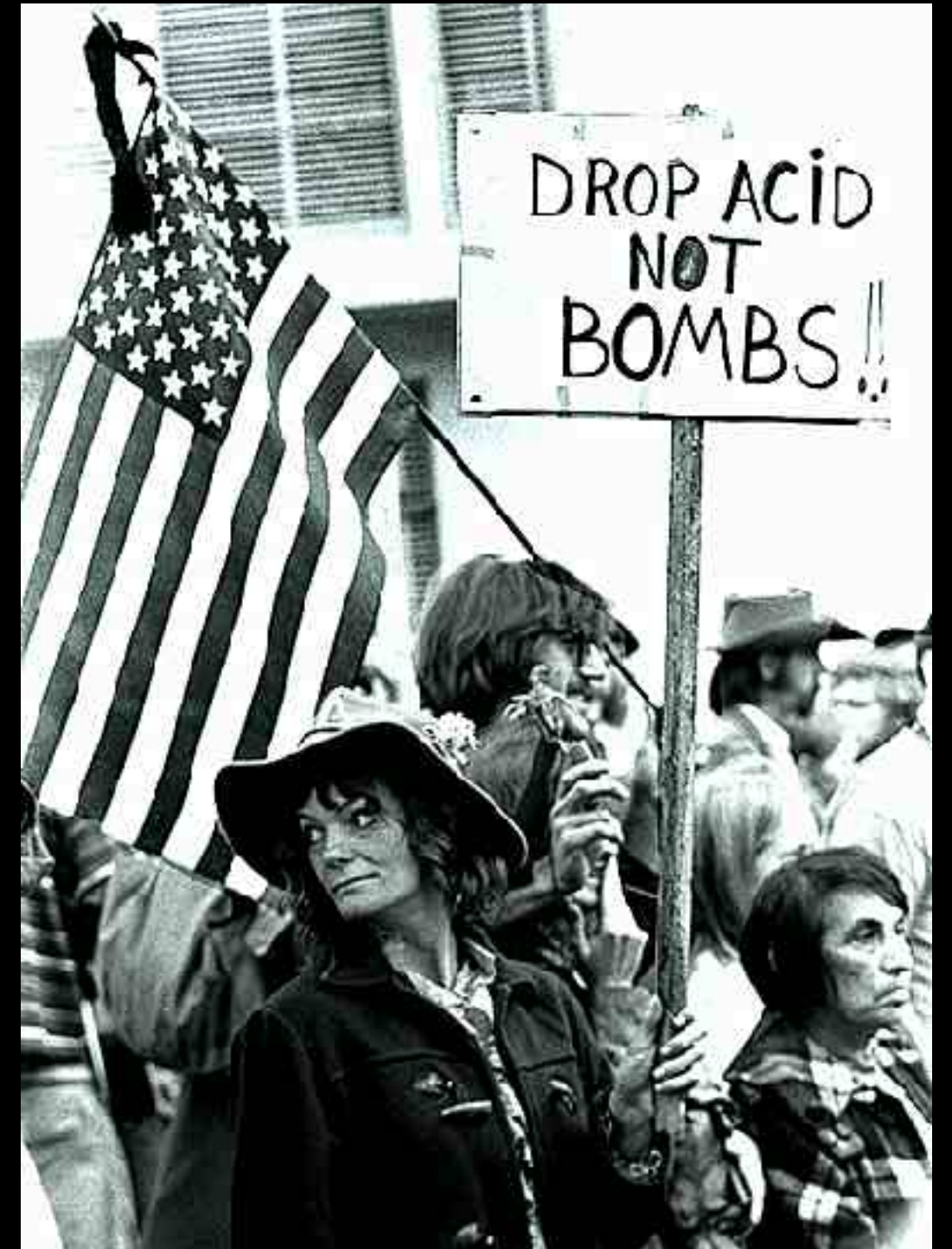
Russia: Cold War, Space Race, “Science Will Save Us.”

Vietnam War

Civil Rights Movement

Counter culture, roots of psychedelic music, hallucinogenic drugs

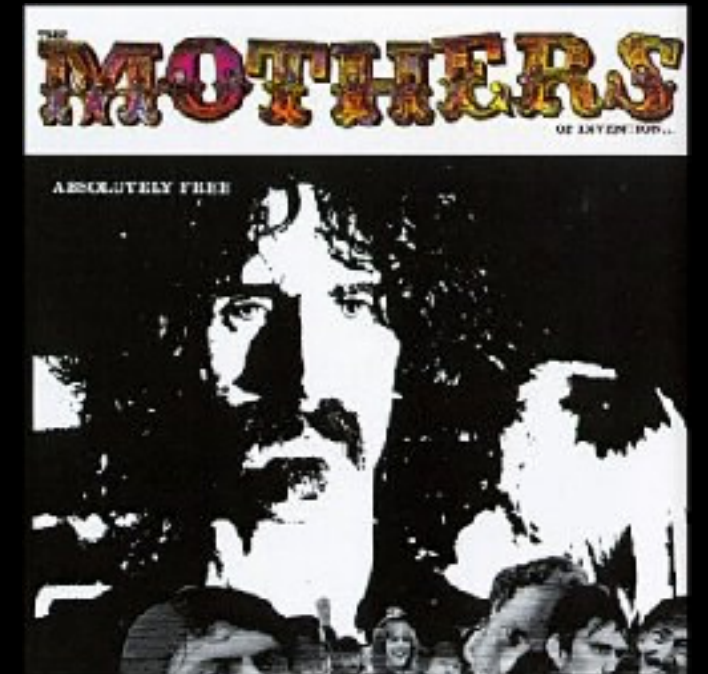
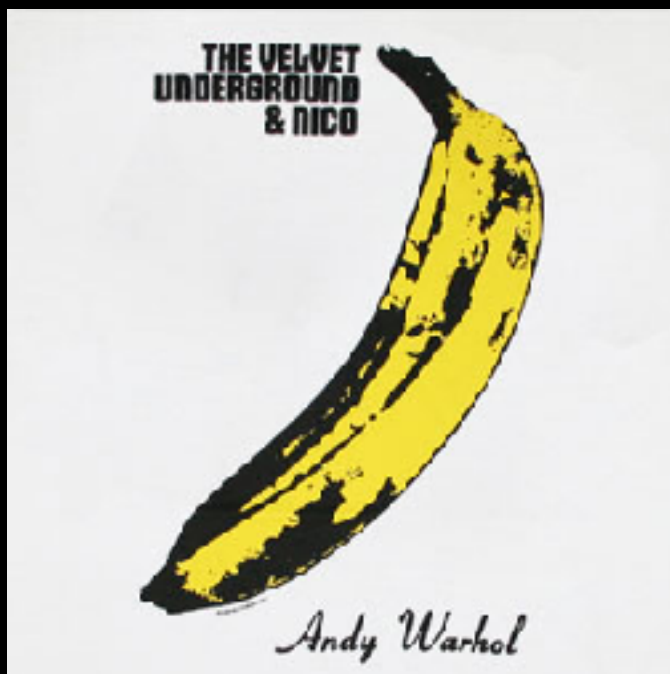
Break with the “establishment”



Woodstock, 1969



1967





MULTI-TRACK TAPE STUDIOS

Allowed for far more complicated arrangements and recording techniques.

Incorporated effects, not just to condition recorded sounds as they were used in classical music, but as integral part in a composition

Types of effects

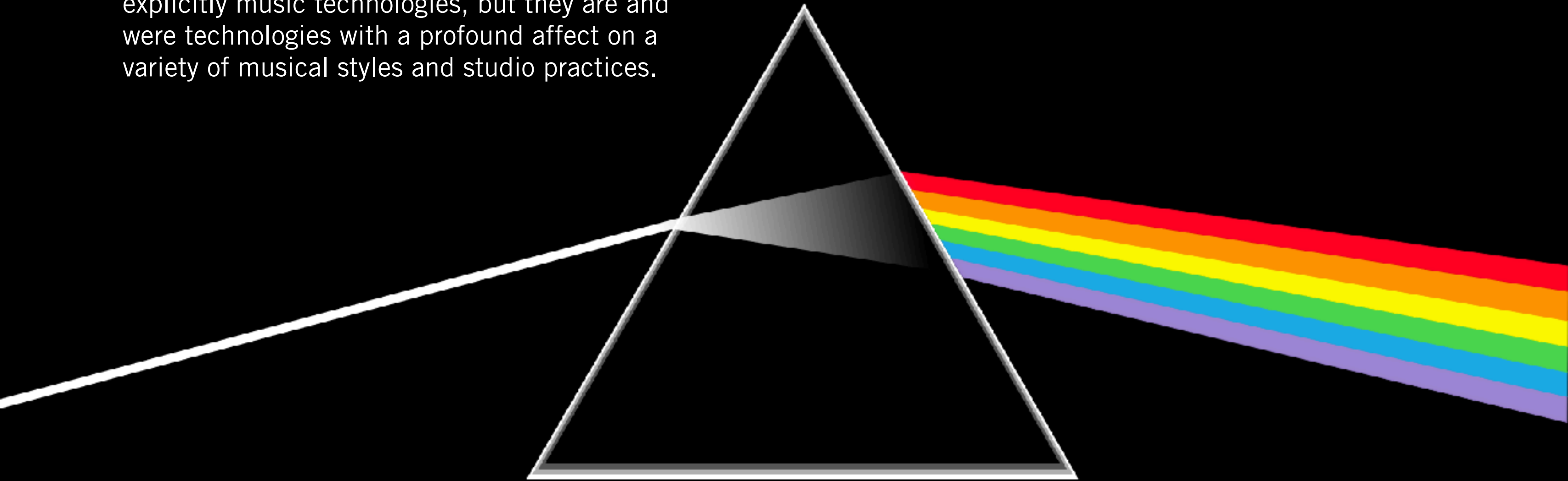
affordability

Bringing studio effects back to the stage.



DRUGS AS TECHNOLOGY

Recreational and pharmaceutical drugs are not explicitly music technologies, but they are and were technologies with a profound affect on a variety of musical styles and studio practices.



NEW FORMS

Studio Album: studio techniques and instrumental forces that could not be easily reproduced on stage.

Concept Album: conceived as a single composition more than a collection of songs.

NEW ELEMENTS

Synthesized sounds, surrealist collage, tape manipulation, echo, extreme panning, vocal processing, feedback, sound effects (everyday sounds), spatial effects, orchestral effects.

SGT. PEPPER'S LONELY HEARTS CLUB BAND



YOKO ONO AND THE AVANT GARDE CONNECTION



Conceptual artist, fluxus performance artist, musician

collaborated with Cage and was part of his circle of experimental artists in NYC.

Started a series of performances in her loft, curated by La Monte Young

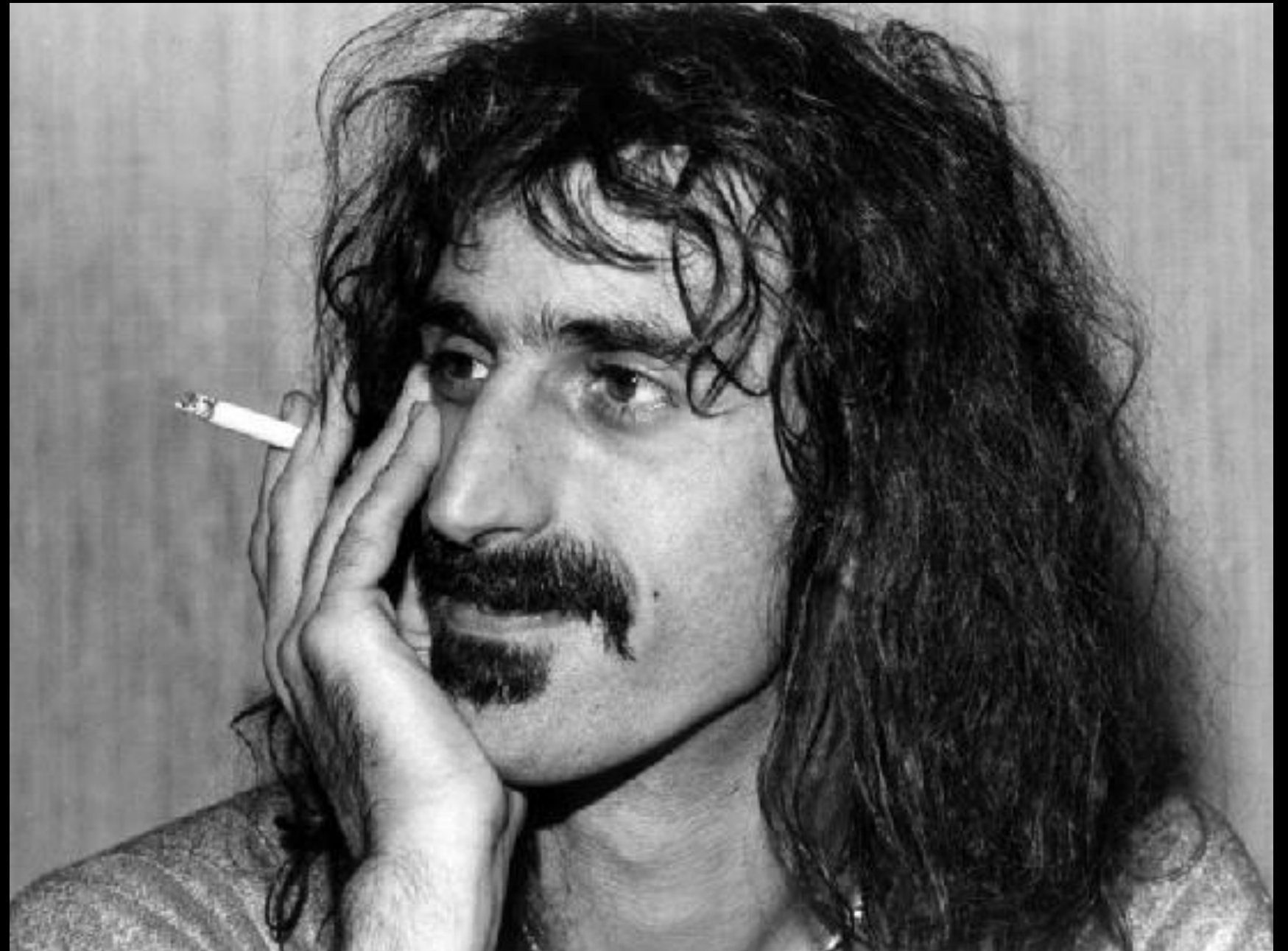
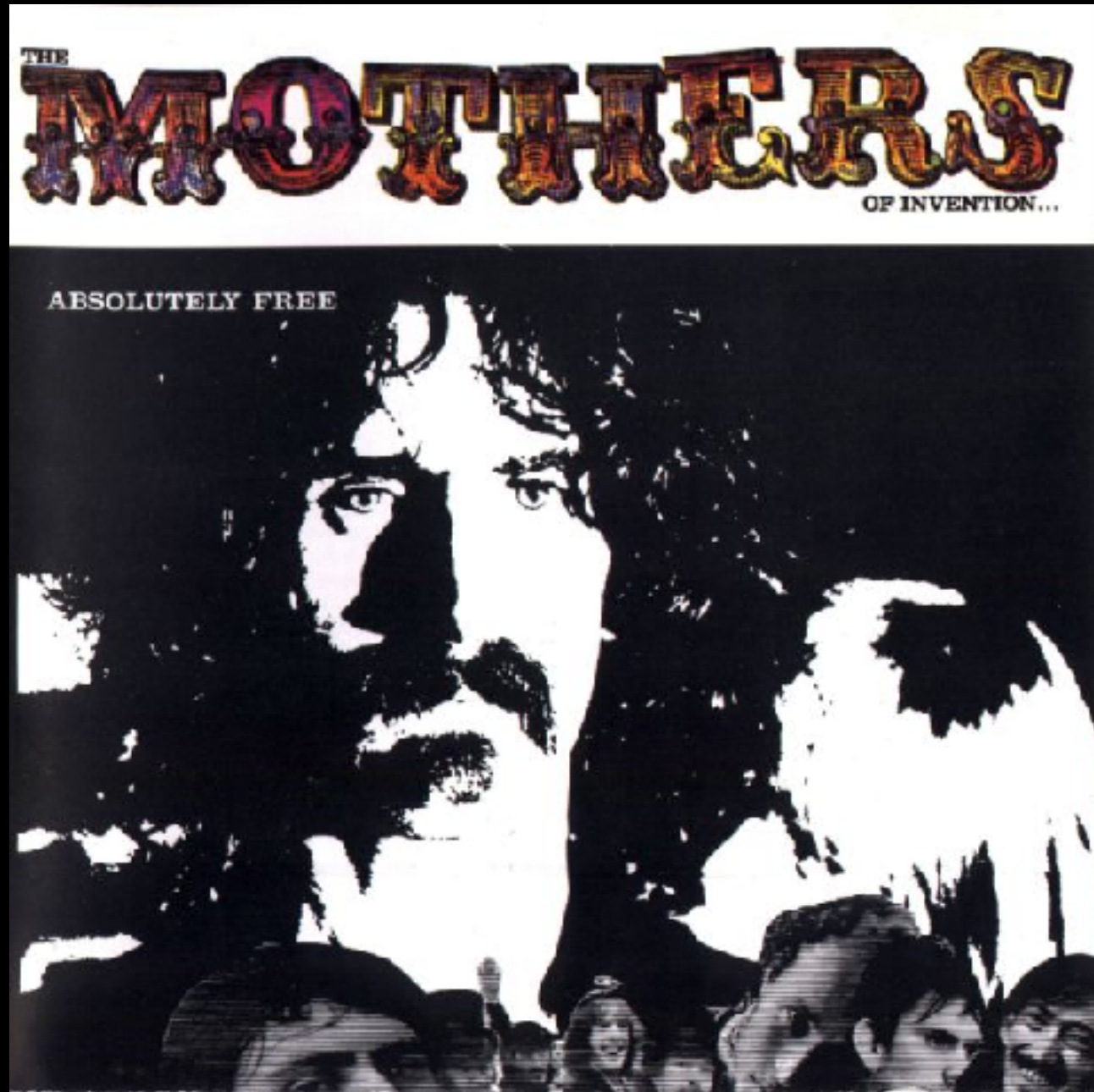
met Lennon in 1966 at a show of her work in London

The Rolling Stones



Excerpt from "2000 Light Years from Home" (1967)

ABSOLUTELY FREE

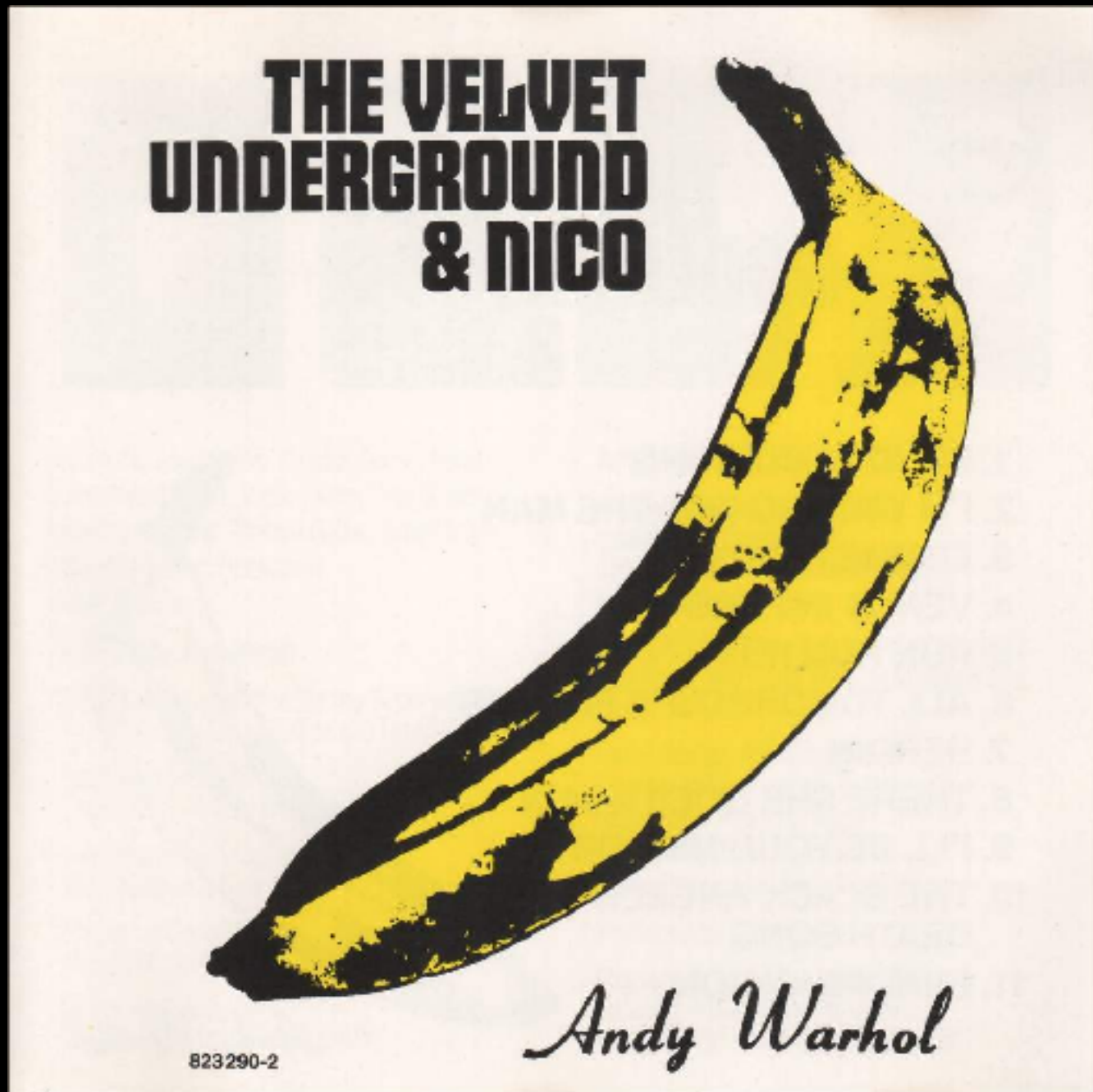


Brown shoes don't make it (excerpt)





THE VELVET UNDERGROUND & NICO



STUDIO TECHNIQUES



LIVE PERFORMANCE

ELECTRIC GUITAR IN THE 1960s

Pedals and Amplifiers

Distortion and Feedback

The 60s introduced effect pedals that brought signal processing to live music.

Musicians had previously experimented with distortion, often as a result of accidentally or intentionally dropped amps and damaged speaker cones.

With both distortion and feedback, what originally was conceived of as a failure is repurposed as a feature



JIMI HENDRIX







ELECTRIC LADYLAND

... And The Gods Made Love (Opening Track)



ARE YOU EXPERIENCED?



EFFECTS PEDALS



FUZZFACE



WAH-WAH

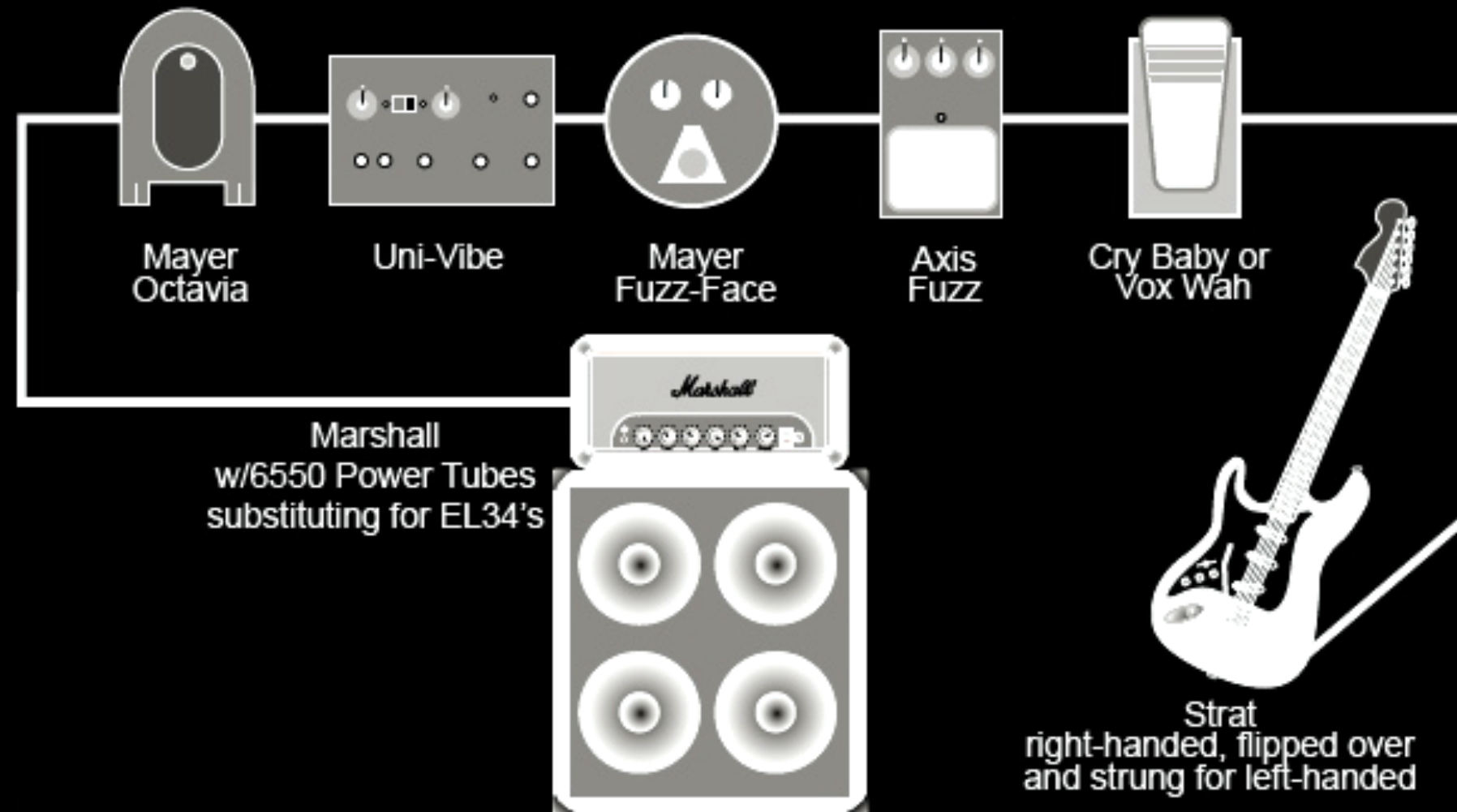


OCTAVIAN



UNI-VIBE

JIMI HENDRIX'S TYPICAL SETUP



TYPES OF EFFECTS UNITS

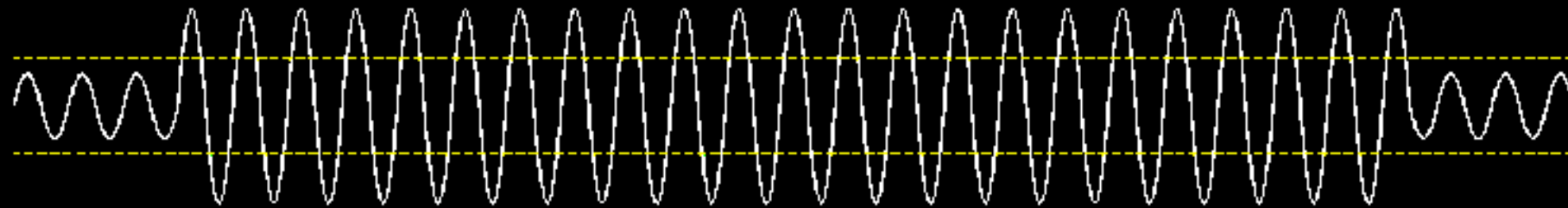
Distortion	reshape sound by “clipping” the audio waveform
Dynamics	Boost / Compression / Noise Gate / (tremolo)
Filter	EQ / Talk Box / Wah
Modulation	Chorus / Flanger / Phaser / Tremolo / Vibrato
Pitch / Frequency	Pitch Shifter / Harmonizer
Time-based	Delay / Looping / Reverb

DISTORTION

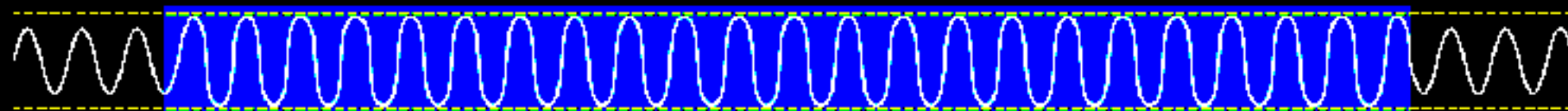


Original Signal

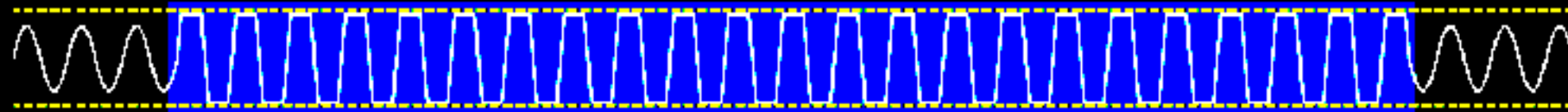
■ Distortion - - - Threshold



Soft Clipping

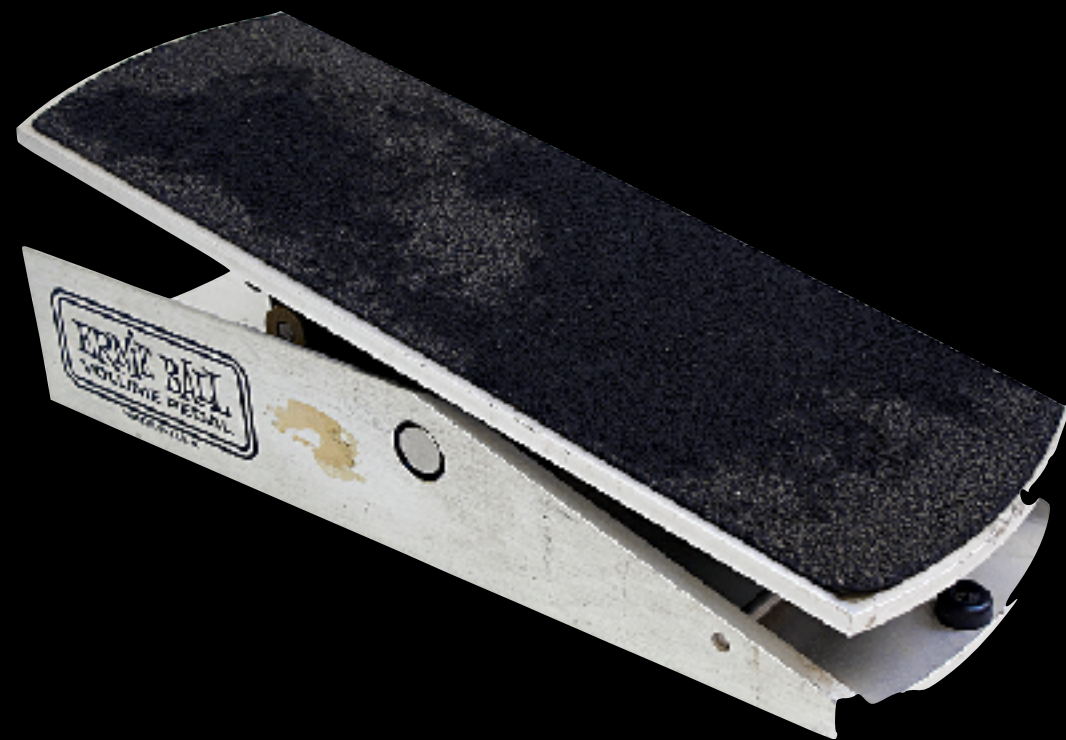


Hard Clipping



DYNAMICS

effect the Amplitude of the signal



volume / boost



compression



gate

FILTER

effects the harmonic content of the sound



Equalizer (EQ)



wah wah



talk box

MODULATION

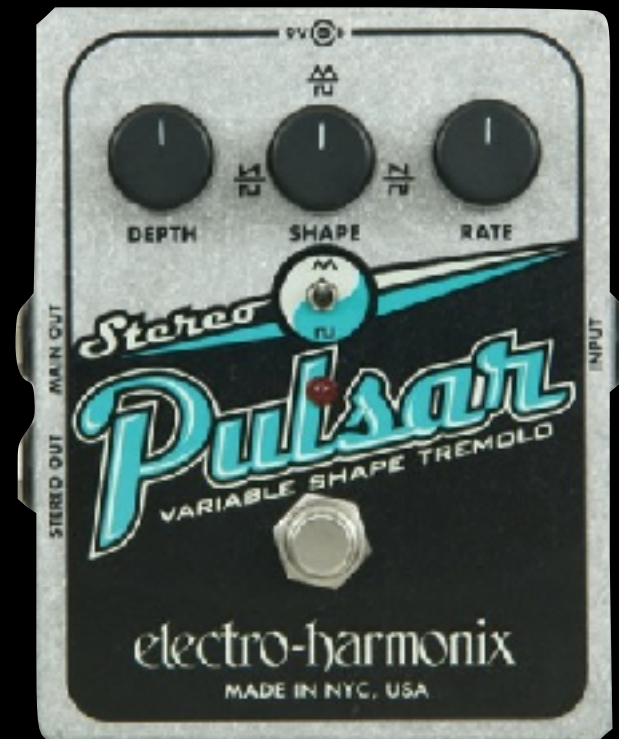
alter an audio signal in some way. either by combining it with another signal (carrier wave) or by mixing the altered and unaltered signal.



Chorus



Phaser



Tremolo



Flanger

PITCH

changes the frequency of the sound wave, or adds sound waves of higher / lower frequencies to the original audio signal.



Pitch Shifter / Harmonizer



Octave

TIME-BASED

delays the audio signal or stores and loops the signal at a predefined interval.
reverb is a stack of short delays that fade out over time.



Delay



Looper



Intense Loop Station



Reverb

