5 Separate, Manual Erasures Found In 18 1/2-Minute Gap on Nixon's Tape **Experts Kule Out** The Floor Pedal As Cause of Buzz

By George Lardner Jr. Washington Post Staff Writer

Technical experts reported in U.S. District Court yesteday that the 18½-minute gap on one of President Nixon's Watergate tapes was the result of at least five separate erasures, all done manually.

They said that none of the erasures could have been caused by the floor pedal that Mr. Nixon's personal secretary, Rose Mary Woods, said she used.

The report strongly suggested that the obliteration was deliberate, but the experts were reluctant to put it in those words, especially in view of a stream of objections from Mr. Nixon's lawyers.

"We have no idea when it occurred or who was responsible," one of the experts, computer scientist Thomas G. Stockham Jr., said in testifying about the obliterated segment. "But it occurred after the original tape was made."

The experts said the "magnetic signatures," or imprints, they found on the tape showed that the buzzing sounds on the 181/2-minute segment "were put on the tape in the process of erasing and re-recording at least five, and perhaps as many as nine separate and continuous segments."

According to the report, the Uher 5000 recording machine that Miss Woods said she used in monitoring the tape for the President last October was "almost surely" the one that was used "in producing the 18.5-minute section."

Beyond that, they said, "hand operation of keyboard controls on the Uher 5000 recorder was involved in starting and again in stopping the recording of each segment. The magnetic signatures observed on the tape show conclusively that the 18.5-minute section could not have been produced by any single, continuous operation.'

Miss Woods had testified last fall that she might have caused a gap in the recording when she stretched around at her desk at White House last Oct. 1 to answer a fiveminute phone call. She said she accidentally pushed the "record" key on the machine instead of the "stop" key and must have kept her foot on the floor pedal while she was chatting.

The experts said it couldn't have happened that way. They said the magnetic imprints detected in at least five places on the tape had to have been caused by the pressing of keys on the recording machine each and every time

"With the hand?" Judge John J. Sirica interrupted at "With a hand. Or with a stick," Stockham replied. "But not a foot pedal?" the judge asked. "Not with a foot pedal?" Stockham assured him.

The findings were immediately contested by White House lawyers at the courtroom hearing Sirica convened to begin airing the report.

Making his debut as Mr. Nixon's chief courtroom advocate, White House special counsel James D. St. Clair objected repeatedly and successfully to attempts to get the experts to state flatly whether they thought the erasures were "deliberate" or "accidental."

Sirica interrupted at one point to say that this was just what he wanted to know, but he ran into a new flurry of objections, this time from Miss Woods' lawyer, Charles S. Rhyne. Throughout the hearing, the experts remained

reticent to answer, skirting the crucial question despite persistent attempts by both the judge and Watergate prosecutors to restate it in satisfactory fashion. Apparently prepared by advice from other experts,

St. Clair made clear in his cross-examination, however, that the White House hopes to demolish even the panel's stated findings. The six-member team was chosen jointly by the White House and Watergate prosecutors, but St. Clair told the panel spokesman, Richard H. Bolt, after yesterday's session that he was "going to talk to my own experts" before resuming his questioning Friday.

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Chagrined, Bolt told him he wouldn't have taken the assignment if he had not thought the White House as weell as Watergate prosecutors were sponsoring it.

"I thought we were your experts," he protested to St. Clair.

The White House special counsel whowed no sign of relenting on his decision to obtain other advice.

The hearing opened with a written, six-page report from the technical panel which has been testing and studying

the June 20, 1972, tape recording for the past two months. The tape in question involved a meeting between the President and then-White House chief of staff H. R. Haldeman. According to Haldeman's notes, the obliterated 18½ minutes came just at the start of a discussion of the Watergate scandal, which had broken into the open three

days earlier. The experts said they found three spots in the $18\frac{1}{2}$ minute segment that contained "a fragment of speech-like sound lasting less than one second." But they said recovery of the conversation was "not possible by any method known to us."

Testifying as the chief spokesman of the panel, Bolt stressed the importance of the three speech-like fragments. He said there were only three points on the 18½-minute segment that the Uher 5000's "erase head" missed, and on each of these what seemed to be bits of words were found.

He said this made it highly probable that the entire segment originally contained conversation that had been wiped out after the tape was first made.

The experts said the mysterious buzzing noises on the tape were probably picked up from the electric power. line to which the recording machine was connected. They said the Uher 5000 Miss Woods used had a faulty com-ponent called a "bridge rectifier," which apparently made it suspectible to electrical noises.

Bolt, however, stressed that the experts considered the precise cause of the buzzing noise really irrelvant. What was important, he said, was the distinct series of "starts and stops" during the long gap. He said the panel found "beyond any doubt" that the

erasures and the buzzing noise that was picked up in their path "had to be recorded uniquely by a certain combination of circumstances."

The Uher 5000, he pointed out, has two components, one called the "record head" and the other called "erase head," that passed over the tape. The erase head comes first and on a Uher machine, Bolt said, its distance from the record head is rigidly fixed at 28.6 millimeters.

To start an erasure, the court was told, two buttons must be pushed, by hand; to stop it, one of several buttons can be pushed, again by hand. But once it is stopped, Stockham said, it leaves a telltale sign, or "signature" of four very fine lines on the magnetic tape, three 3-millimeter lines from the erase head and one 21/2-millimeter line from the record head. The lines can be seen under

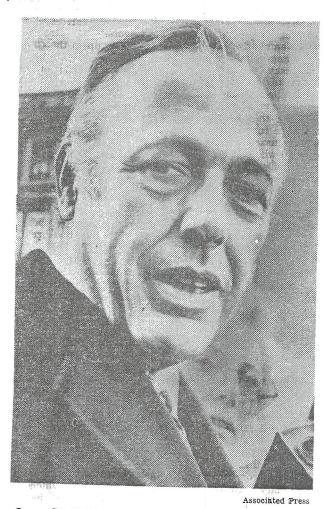
special tests. The signature, Stockham said, can be made only by stopping the machine manually and it can be found on the obliterated segment in five separate places.

Stopping the machine by lifting your foot from the floor pedal will leave a "signature," too, Stockham said, but this will consist only of the 2½-millimeter line from the record head.

The four-line of "quartet signature," he said, "cannot be made on the foot pedal."



Watergate prosecutors Jill Volner and Richard Ben-Veniste enter courthouse for hearing.



James St. Clair: "I'm going to talk to my own experts."

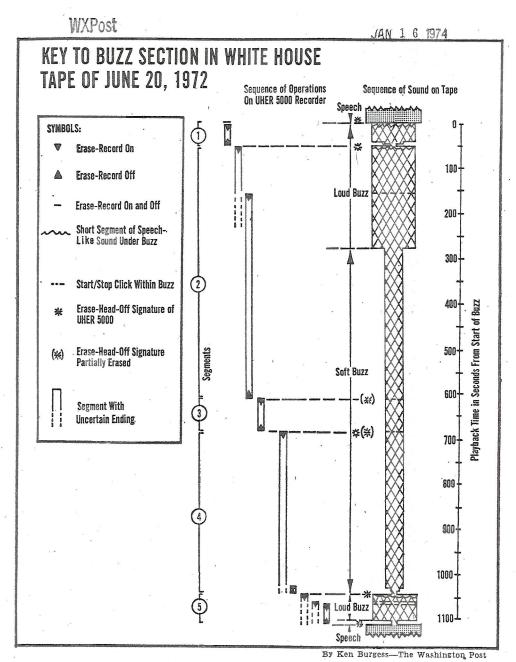


Diagram indicates those segments of tape that were erased and/or re-recorded.