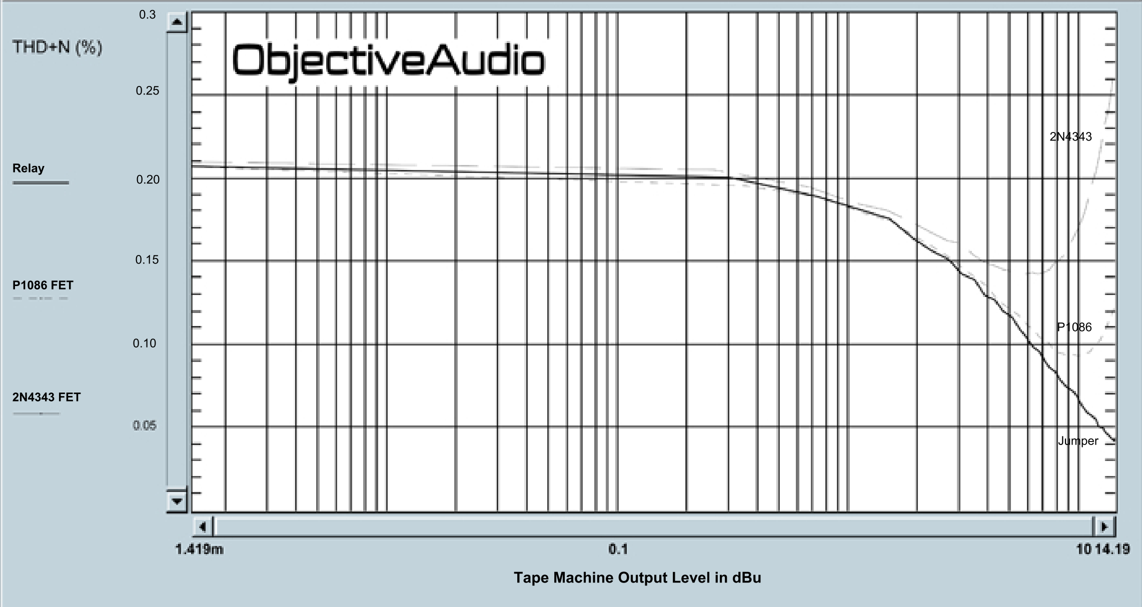
3M M79 Tape Machine - Comparison of distortion between FETs & Relay - 1kHz - Repro



Conditions of test:
The tape machine used in the test was a 24-Track 3M M79 having input and output transformers, with its meters disconnected and its speed set to 15ips. Three signal electronics cards were verified to have the same modifications, and were aligned in repro to be equal withn .1dBu from 20Hz to 20kHz. One card's Q10 (output switching FET), Q35 (repro switching FET) and Q27 (repro low speed EQ FET) were fitted with 2N4343 FETs. Another card's Q10, Q35, and Q27 were fitted with P1086 FETs. The final card's Q10, Q35, and Q27 were removed and replaced with a jumper wire. All measurements were made in the same track slot of the 24-Track, ensuring that the tests only reflected card differences. An induction loop was attached to the 24-Track's repro head to apply a 1kHz tone. The test equipment used was an HP 8903B Audio Analyzer with its 30kHz low pass filter enabled. To ensure accuracy, the tests were conducted many times using different cards and using the same card with its FETs swapped. Tests were also made with other frequencies (50Hz & 10kHz), with no substantial difference in measurement results.