Partisan Labs
ADL-1 SCN-20250105

ADL-1 Security Notice 20250105

On Dec 30, 2024 a customer contacted Partisan Labs and reported a defect in the generation of numeric One Time Pads (OTP). The defect resulted in the over representation of the digits 1 and 2 in the generated pads.

We have confirmed this defect does exist and is a software only defect. The underlying TRNG hardware is working properly. The error is in the last stage of pad creation when the random numbers are converted to human readable digits.

This defect reduces the security of the generated numeric pads to something along the lines of a book cipher. Any numeric pads that have this defect should be used for training purposes only.

The defect has been fixed and an updated firmware package for all version of the printer is available. The new firmware and instructions for updating can be found at

https://partisanlabs.com/adl-1-otp-printer-firmware-downloads/

Defect Analysis

Here we can see the effect of the defect over 100 250 digit pads generated in 10 second intervals. Digit 1 in orange and digit 2 in yellow.

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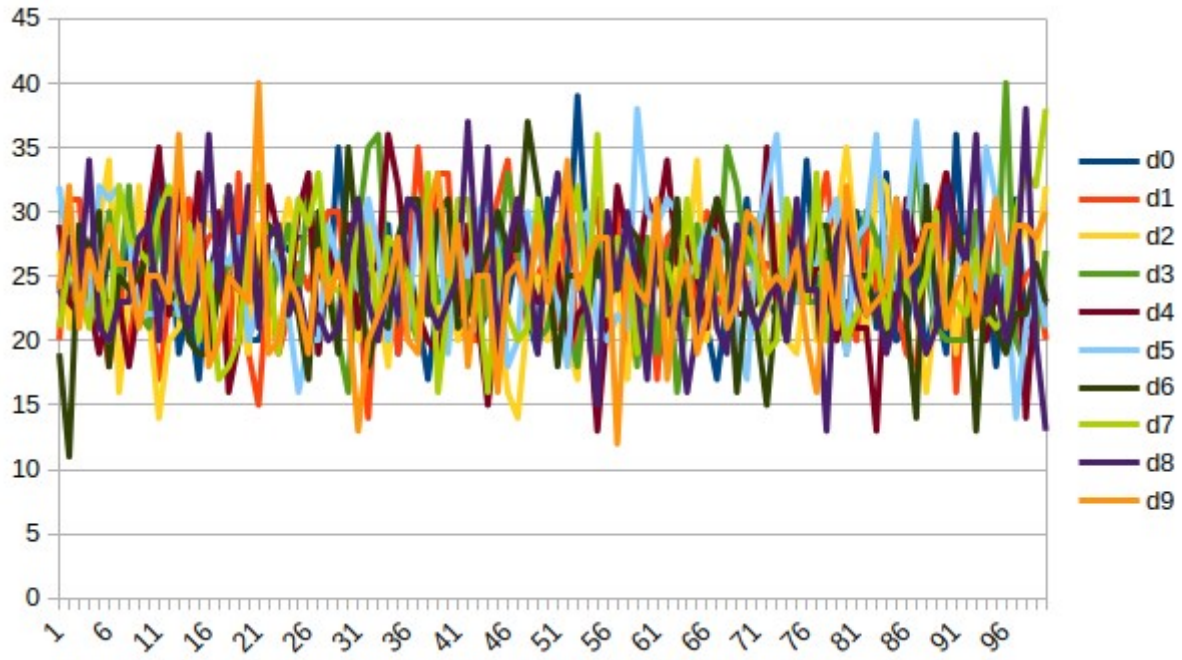
Here is same type of graph with the fixed firmware, 100 250 digit pads, generated in 10 second intervals. Same coloring for the digits.



Significantly better. Full data for 1000 250 digit pads at 10 second intervals along with TRNG Dieharder analysis and Grey scale bitmap analysis are available here

https://partisanlabs.com/wp-content/uploads/2025/01/ADL-1_SN-20250105.zip

SHA512:
7d412f619125b5274baae15a5ca7bbb2f11401c739deb83d5528022eb26082c9d26a7bff0d33820d81
7d3daced5a242b16f966652dcab9895c7e7ea66e9c977a

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TRNG raw and whitened output is available here

https://partisanlabs.com/wp-content/uploads/2025/01/ADL-1_SN20250105_rng-raw.zip

SHA512:
c5b11f2b8062b99d7e830503bc71520e7a825a1ba7f137de934ab6f9916f03d94740c46c5cc249cf9b9484a88f3045ec107b32601199469d2606e011c915da76

https://partisanlabs.com/wp-content/uploads/2025/01/ADL-1_SN20250105_rng-white.zip

SHA512:
bc5e2aa43f6201357d75cbc6167c2c2410a32f06990305f004f650185c049a5dcd3ff030fc3da7a96638014e92047022f27cb8829f984a37ccb5950539053888

We apologize for any inconvenience this may have caused you. If you have any questions please email us at support@partisanlabs.com.