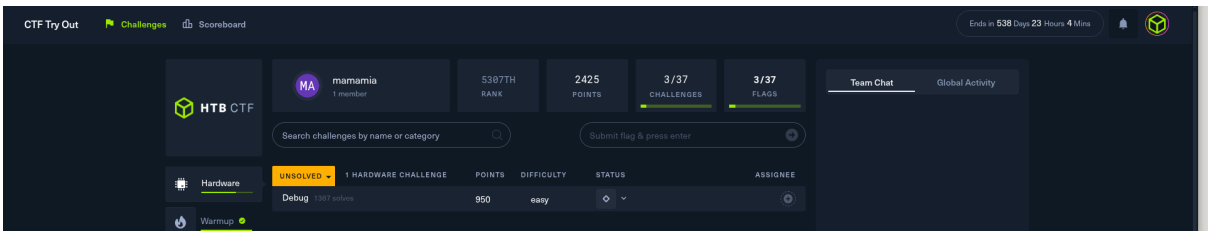
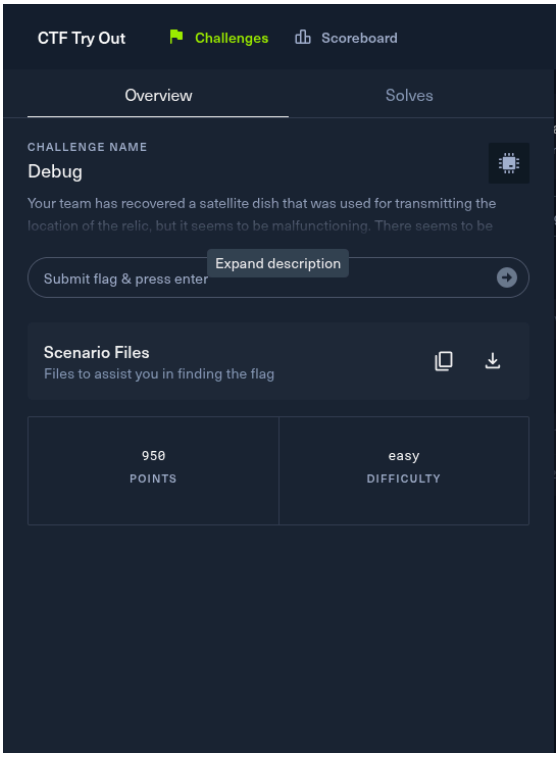
CTF WRITEUP - **abinrd@mulearn**

Well the CTF I chose was DEBUG from HTB CTF PLATFORM

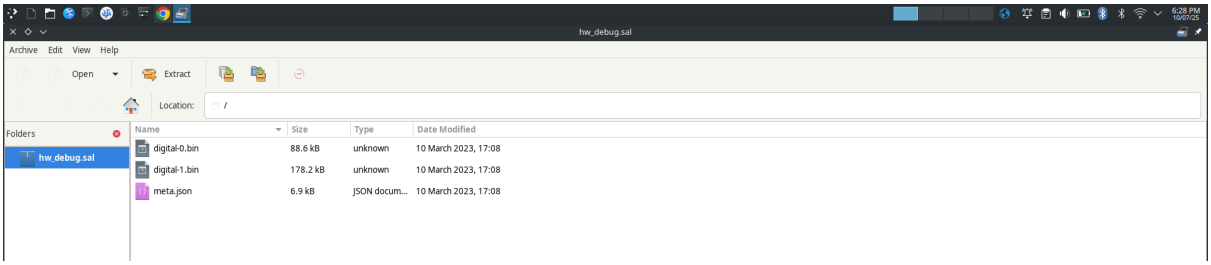


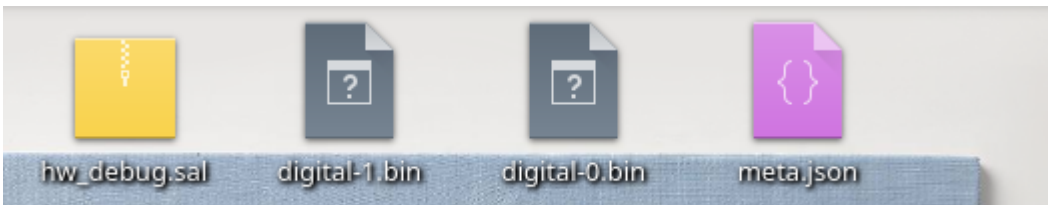
IT was a HARDWARE based easy level CTF(was a bit hard-medium for me got introduced into new applications used for CTF)

We are given a mysterious binary boot image or access to a UART output from a space-themed embedded system. The device seems to be a satellite dish interface. Our task is to **capture and analyze the UART output** to recover the **hidden flag**, likely hidden within the boot logs.

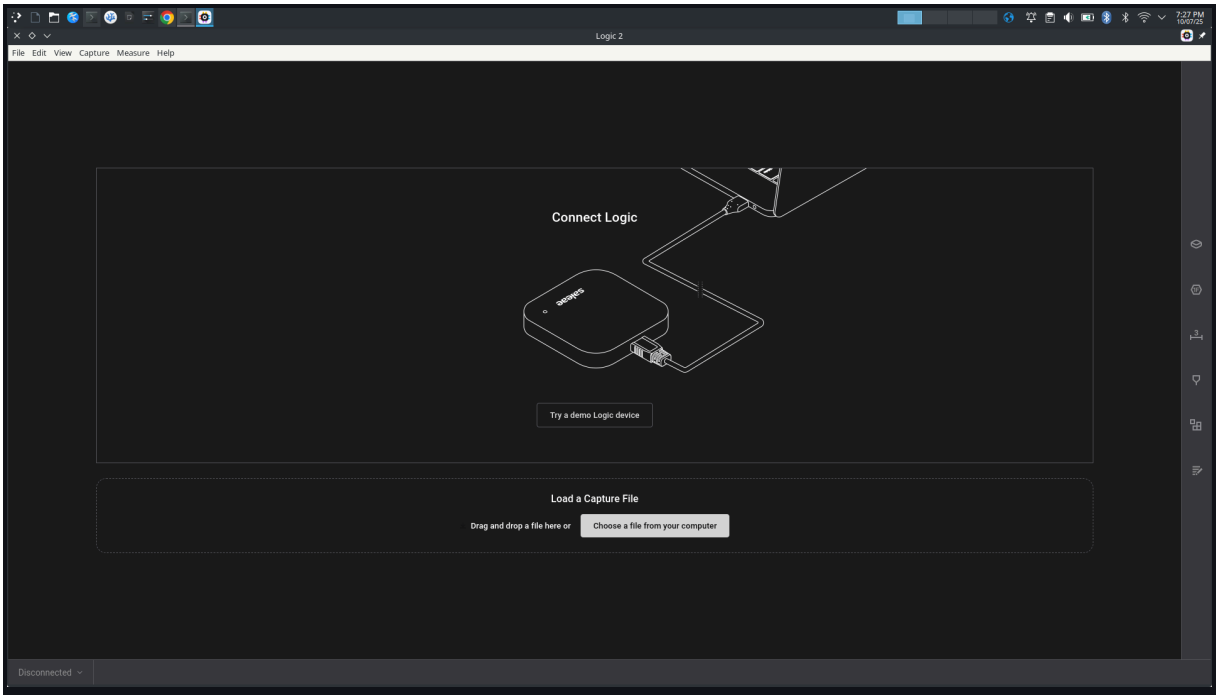


After downloading the Scenario Files i got the hw_debug.sal file which contained
Two '.bin' extension file and a '.json' file

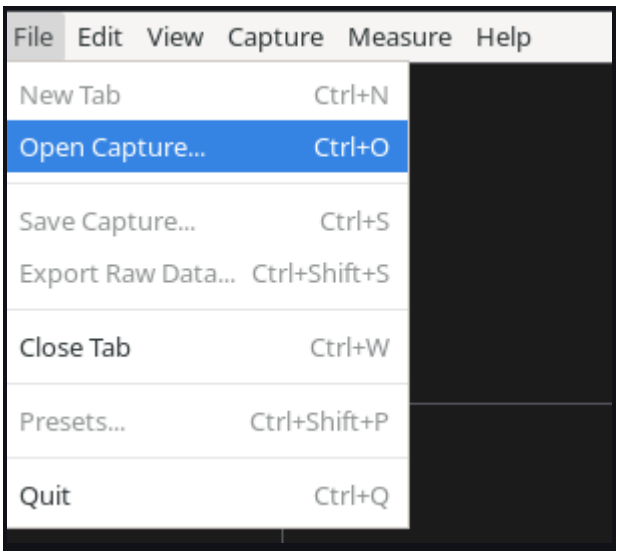




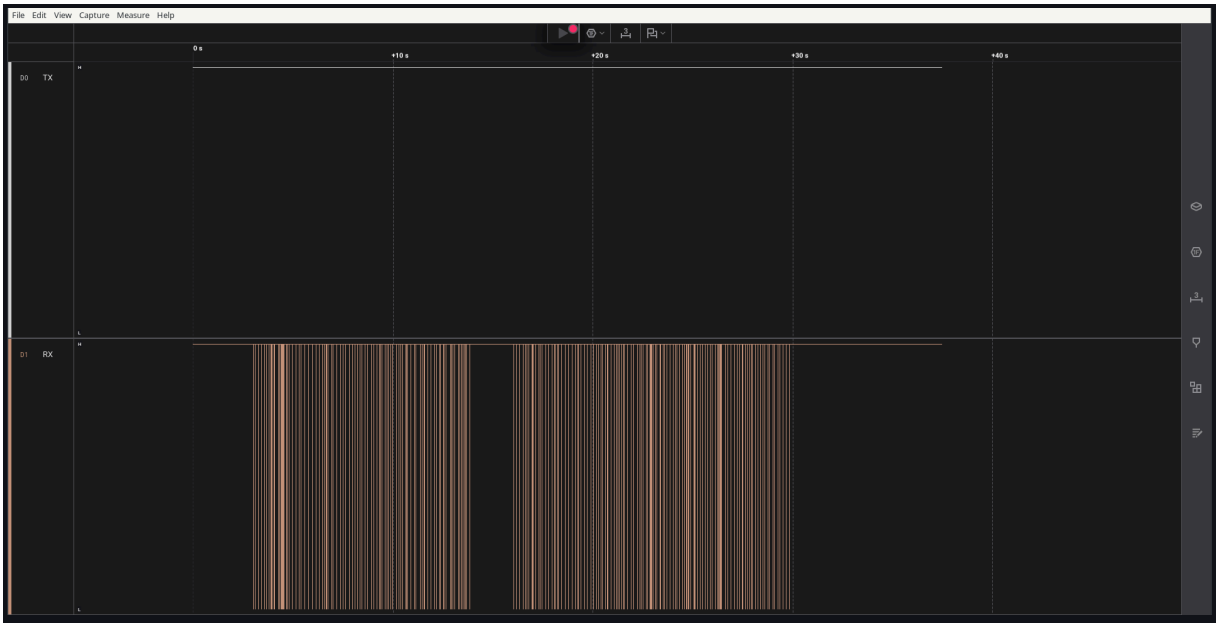
Was introduced to Logic 2 (Saleae Logic Analyzer Software) : Logic 2 is a powerful, professional-grade software for Saleae Logic Analyzers, used by embedded systems engineers, hardware developers, and electronics professionals .

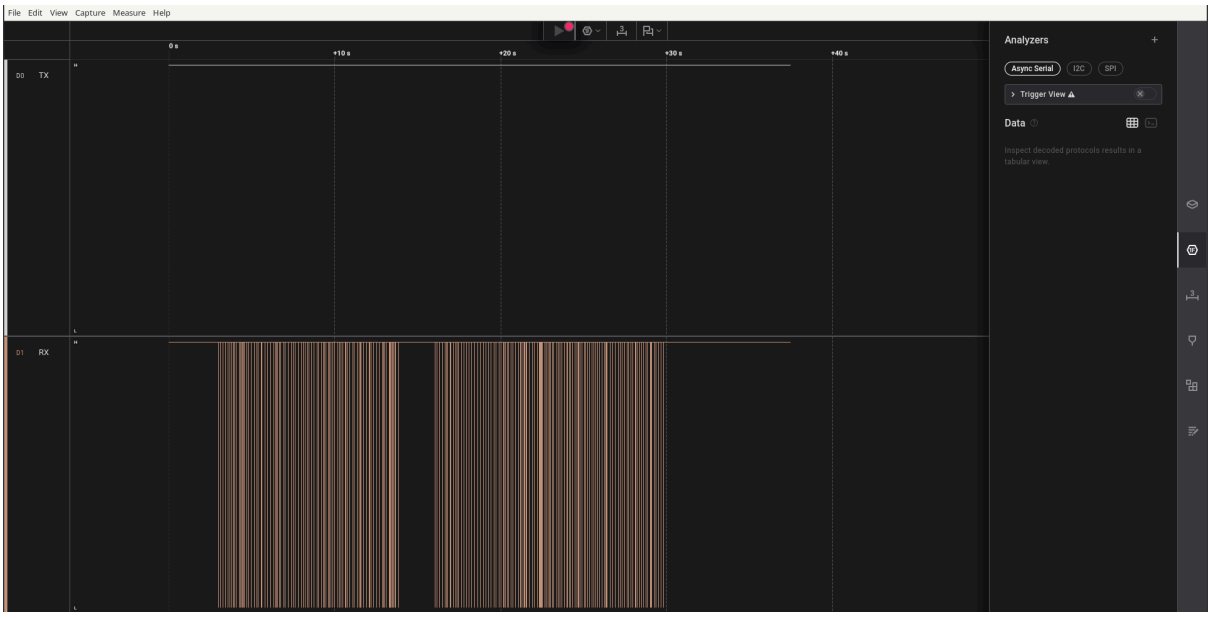


Go to Files and Open new Capture from There as this application is not able to upload raw binary files directly upload the ‘.sal’ folder

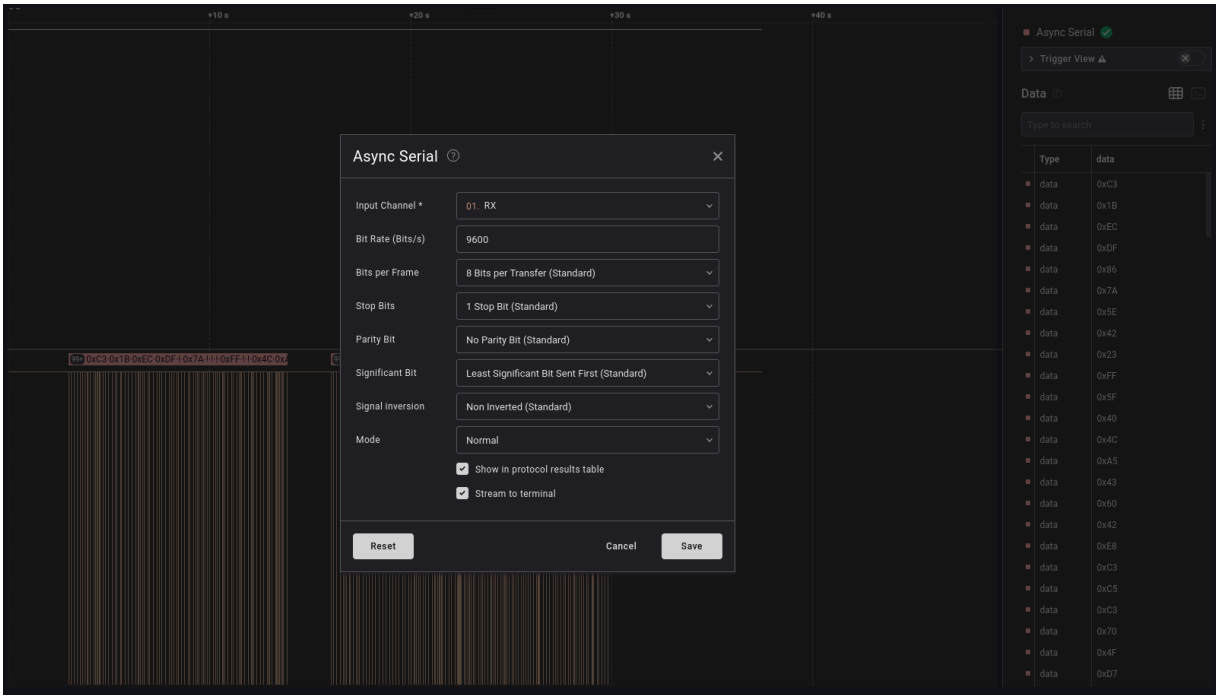


This is what the binary file from the folder looks like turned into two frequency



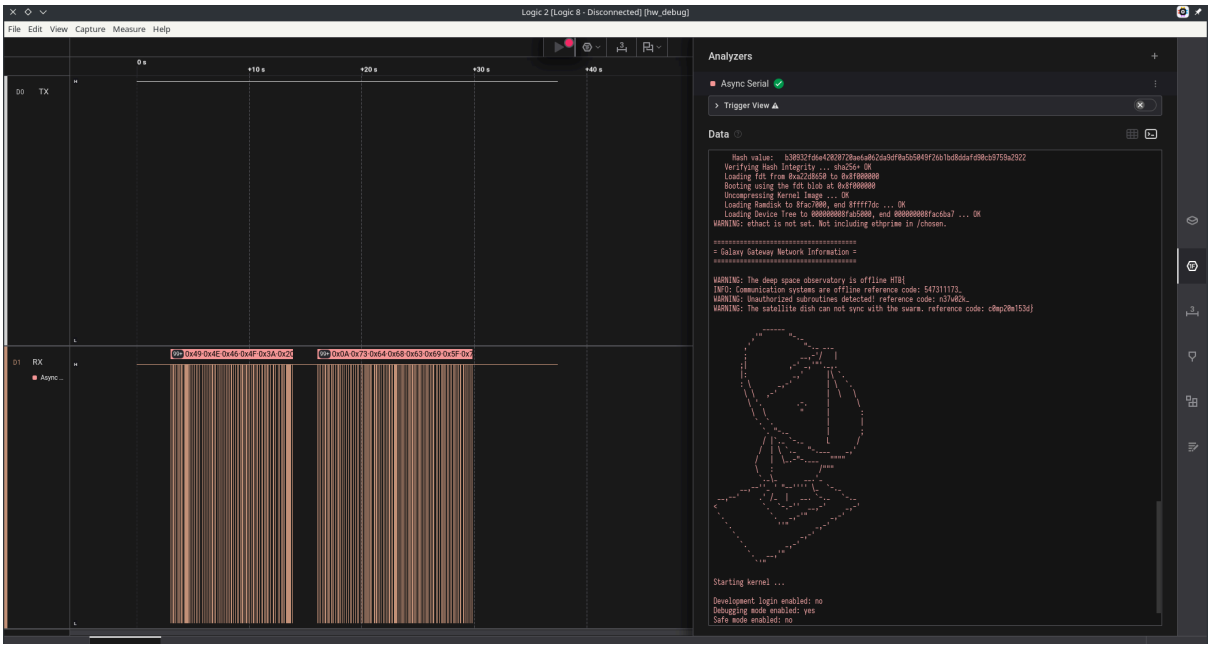


ADD Async Serial and have all the options same except Bit Rate try exploring with it

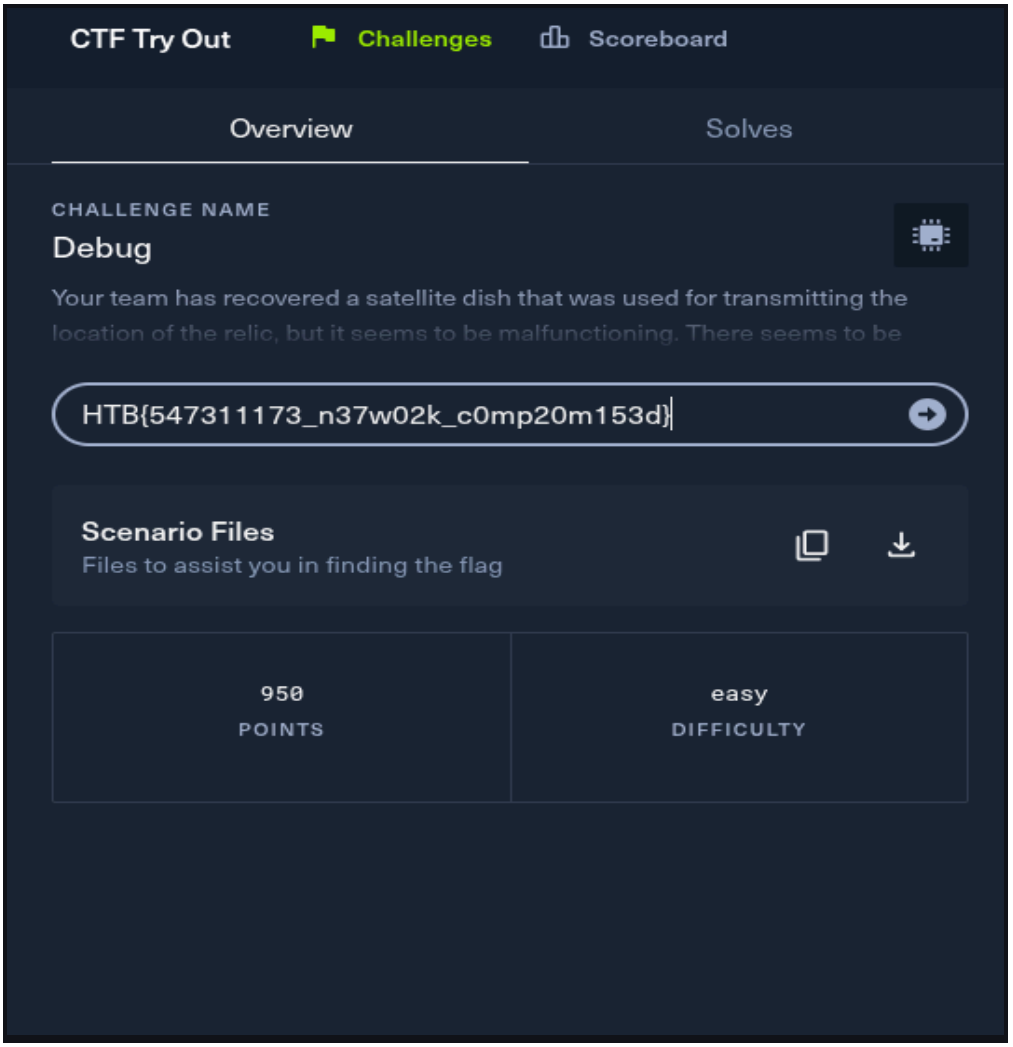


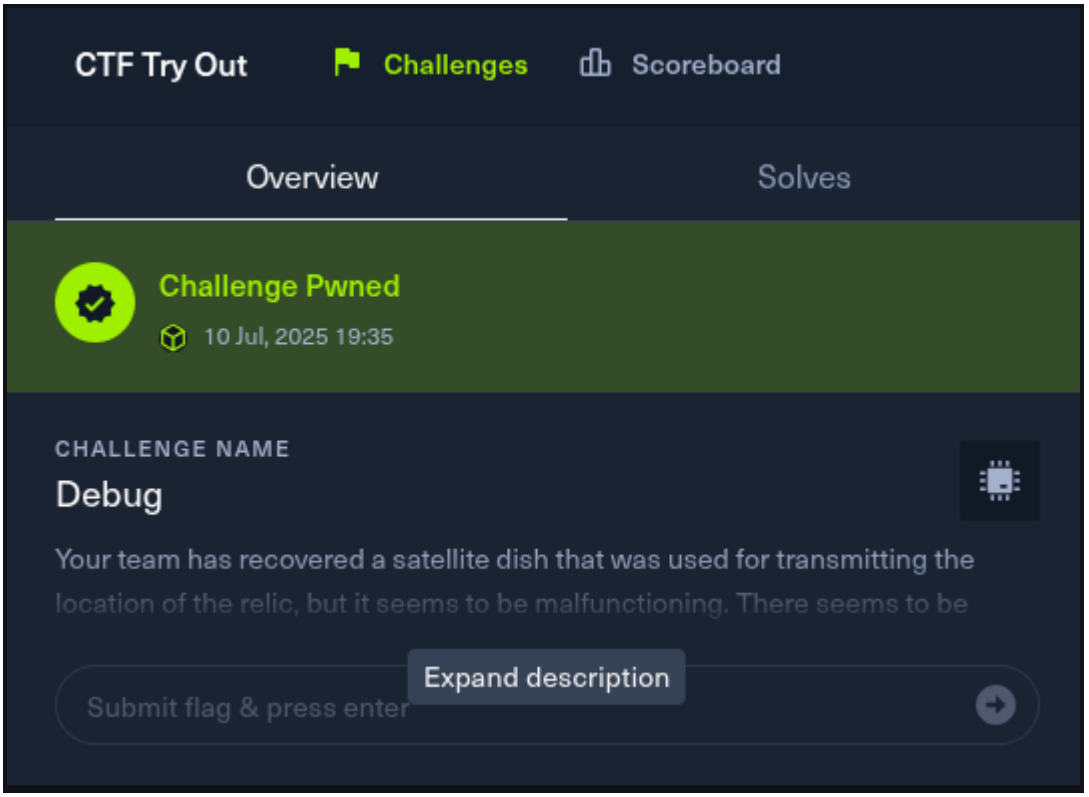
When you're adding the **Async Serial analyzer** to either `Channel 0 (TX)` or `Channel 1 (RX)`, try each of these:

Baud Rate	What to Look For
9600	Often used in microcontrollers
19200	Legacy systems
38400	Mid-range
57600	Common for debugging
115200	Most common for fast debug/log output in embedded/CTFs



In the Data Field you can see text which is what we have decoded from the binary files scrolling down we can spot a particular part in the text which shows us the flag in 3 lines


CTF Try Out
Challenges
Scoreboard
Overview
Solves
CHALLENGE NAME
Debug
Your team has recovered a satellite dish that was used for transmitting the location of the relic, but it seems to be malfunctioning. There seems to be
HTB{547311173_n37w02k_c0mp20m153d}
Scenario Files
Files to assist you in finding the flag
950
POINTS
easy
DIFFICULTY


CTF Try Out
Challenges
Scoreboard
Overview
Solves
Challenge Pwned
10 Jul, 2025 19:35
CHALLENGE NAME
Debug
Your team has recovered a satellite dish that was used for transmitting the location of the relic, but it seems to be malfunctioning. There seems to be
Expand description
Submit flag & press enter