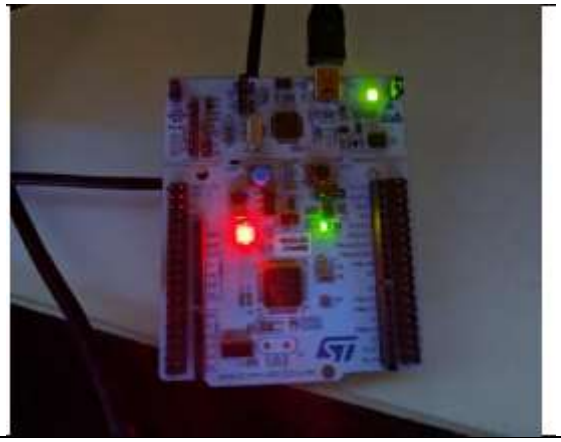
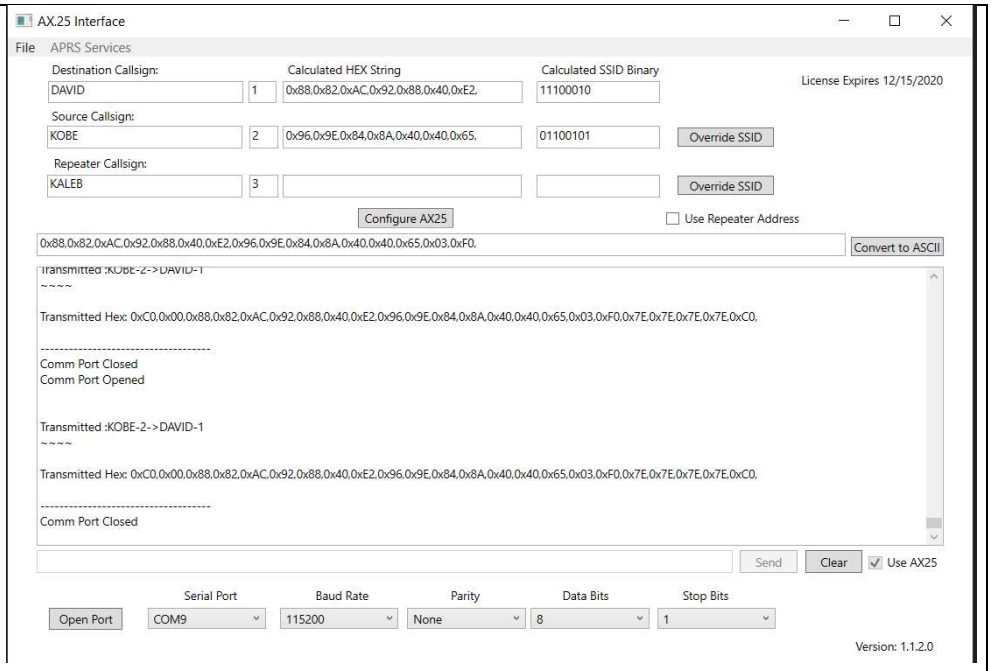
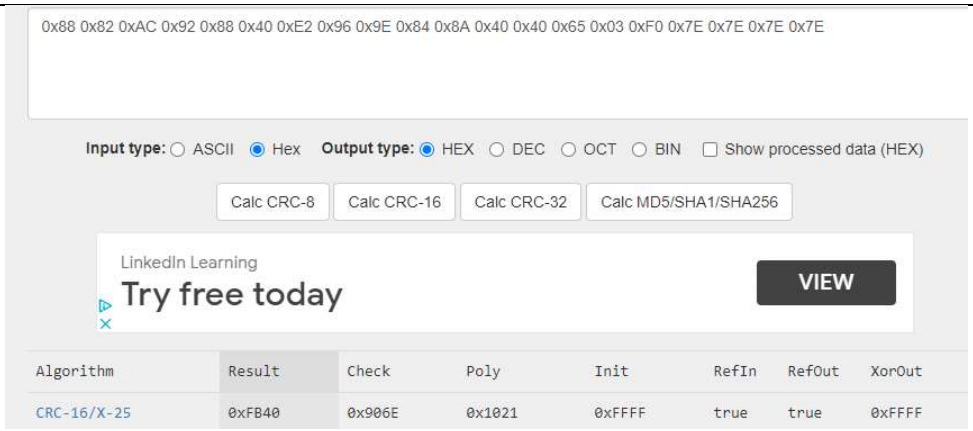
TNC Testing Form (REV1)	
Leaf on the Tree	AX.25 Protocol
Device Under Test (Testing Tree Number):	2.2.1
Date:	11/1/20
Person(s) Conducting Experiment:	Kobe Keopraseuth
Signature:	
Experiment Purpose:	The purpose of this experiment of this experiment is to verify that our microcontroller can take in a KISS packet and format the AX.25 Packet Correctly.
Experiment Procedure:	Take in a KISS packet from computer and display the fields of the AX.25 packet. We will also show the calculated crc to show that the KISS packet for properly extracted.
Equipment Settings / Software Settings (w Revision):	Use Rizwan's software to send a KISS packet and display the AX.25 packet on serial monitor.
Testing Diagram / Picture:	
Data Points:	



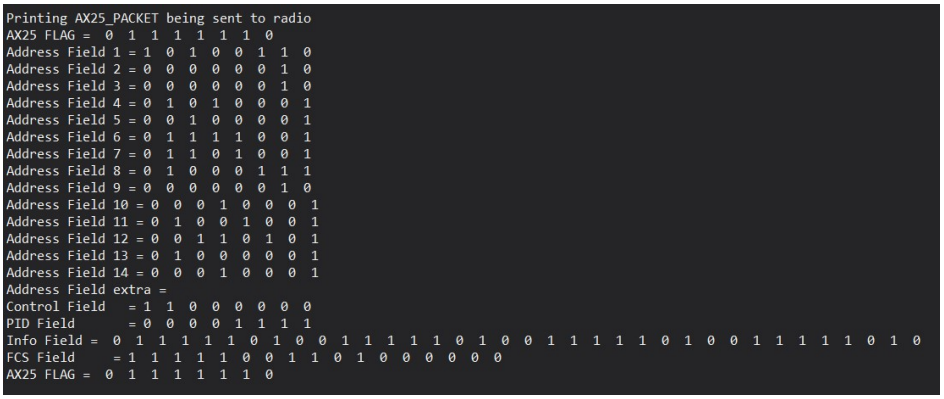
Rizwan's software for transmitting KISS packets

```
Start flag      = 1  1  0  0  0  0  0  0
Address Field 1 = 1  0  0  0  1  0  0  0
Address Field 2 = 1  0  0  0  0  0  1  0
Address Field 3 = 1  0  1  0  1  1  0  0
Address Field 4 = 1  0  0  1  0  0  1  0
Address Field 5 = 1  0  0  0  1  0  0  0
Address Field 6 = 0  1  0  0  0  0  0  0
Address Field 7 = 1  1  1  0  0  0  1  0
Address Field 8 = 1  0  0  1  0  1  1  0
Address Field 9 = 1  0  0  1  1  1  1  0
Address Field 10 = 1  0  0  0  0  1  0  0
Address Field 11 = 1  0  0  0  1  0  1  0
Address Field 12 = 0  1  0  0  0  0  0  0
Address Field 13 = 0  1  0  0  0  0  0  0
Address Field 14 = 0  1  1  0  0  1  0  1
Control Field   = 0  0  0  0  0  0  1  1
PID Field       = 1  1  1  1  0  0  0  0
Info Field 1    = 0  1  1  1  1  1  1  0
Info Field 2    = 0  1  1  1  1  1  1  0
Info Field 3    = 0  1  1  1  1  1  1  0
Info Field 4    = 0  1  1  1  1  1  1  0
Stop flag       = 1  1  0  0  0  0  0  0
```

Bitstream output of received KISS packet

<table>
<tr>
<td></td>
<td>


<u>Online crc calculation for the KISS packet</u>


<u>Microcontroller’s crc calculation for KISS packet</u>


<u>AX.25’s bit sequence when sent to radio</u>
</td>
</tr>
<tr>
<td>Pass / Fail:</td>
<td>Pass</td>
</tr>
<tr>
<td>Interpreted Notes:</td>
<td>Our microcontroller can properly extract a KISS packet and format it into AX.25, along with correctly calculating the crc for the FCS field. It is also able to place the bits to be sent to over radio in the correct order.</td>
</tr>
<tr>
<td>Recommendations for Modifications:</td>
<td>None</td>
</tr>
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