

PROJECT: THIRD PARTY, DIY REPLACEMENT OF THE OBSOLETE TOSHIBA PROGRAMMING CABLE FOR THE EX100 CPU: PU11A and PU12 "CURRENT LOOP" MODEL: EX25GP232A-TIC2 USING A BnB 232CL9R CONVERTER- MODIFIED FOR 5 VDC

<http://www.plctalk.net/qanda/showthread.php?t=69165&page=5>

JRW:

"I think I have discovered some of the problems why the BnB device is being so difficult to adapt. If they had used +5vdc instead of +12vdc, that would have helped. Also, using their device, I can see a need to jumper the PLC port connector A2,B2 to B4 to their +12vdc terminal which would be equivalent to the direct +5vdc connection on the DIY. On the BnB device there is also a need to jumper their +12RES terminal to the +12 terminal where an external power source would be connected. Then, maybe a jumper from RES1 to R1+. Next, a jumper from the R- to the T+ on the PLC port. This is similar to a portion of figure 3 of the drawing 232cl9r_BnB_schematic.pdf. Also A4 needed to jumper to A1,B1 of the PLC port. I realize that the word description is confusing. This might not be the whole answer or 100% correct since I don't have either the BnB device or PLC available to test."

BKS:

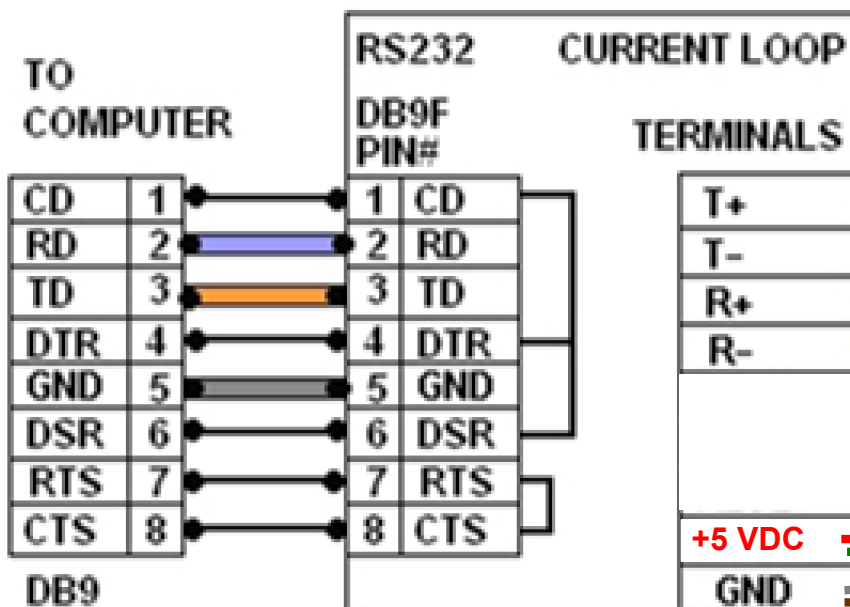
"I don't want to risk putting 12VDC across the 5VDC port... I feel a bit safer as shown below:"

After the previous dialogue with JRWB4GBM at PLCTALK.NET I was hit with a LBM (Light Bulb Moment). I diagrammed his idea and then it hit me: Change the BnB Converter to 5 VOLTS!!! Well after a lot of prayer, pacing, Googling, chatting with distributors and on and on... hours later I did the following and it worked!!! HalleluYAH!!! And Thank You JRW!!!

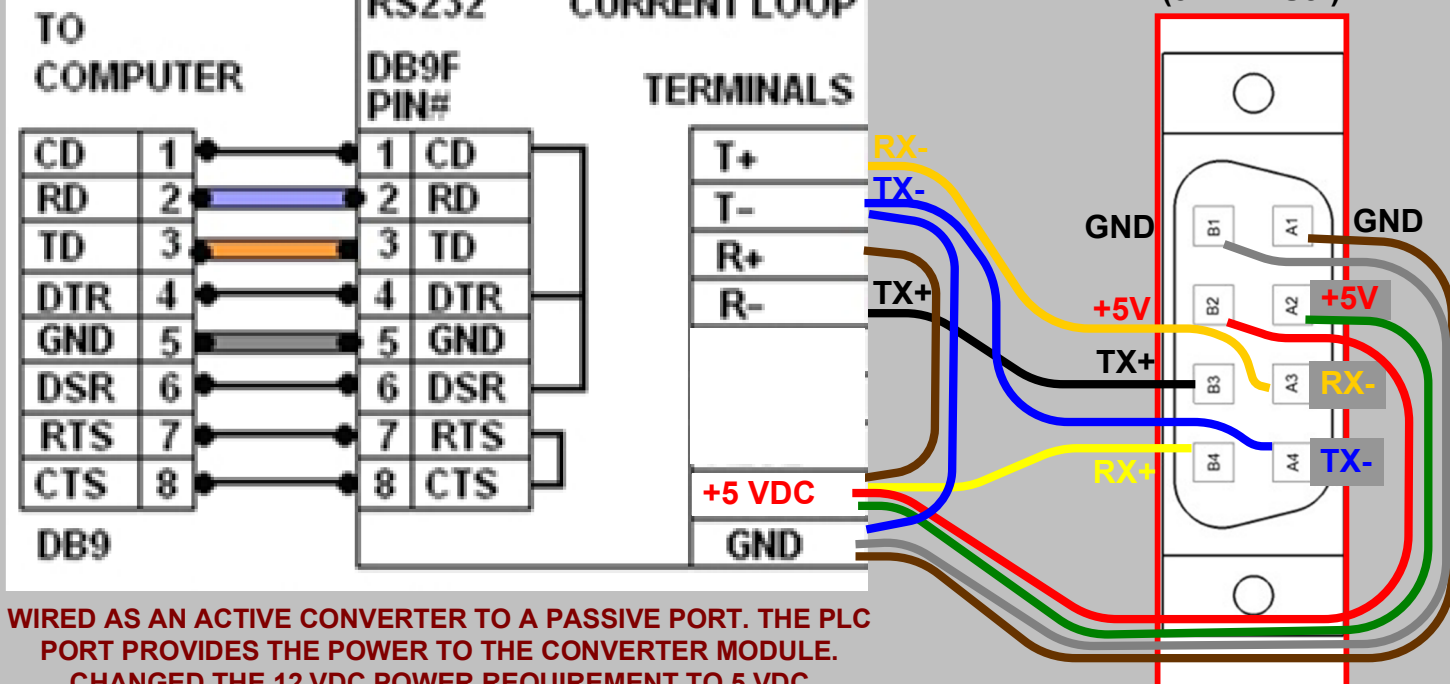
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06.24.2015

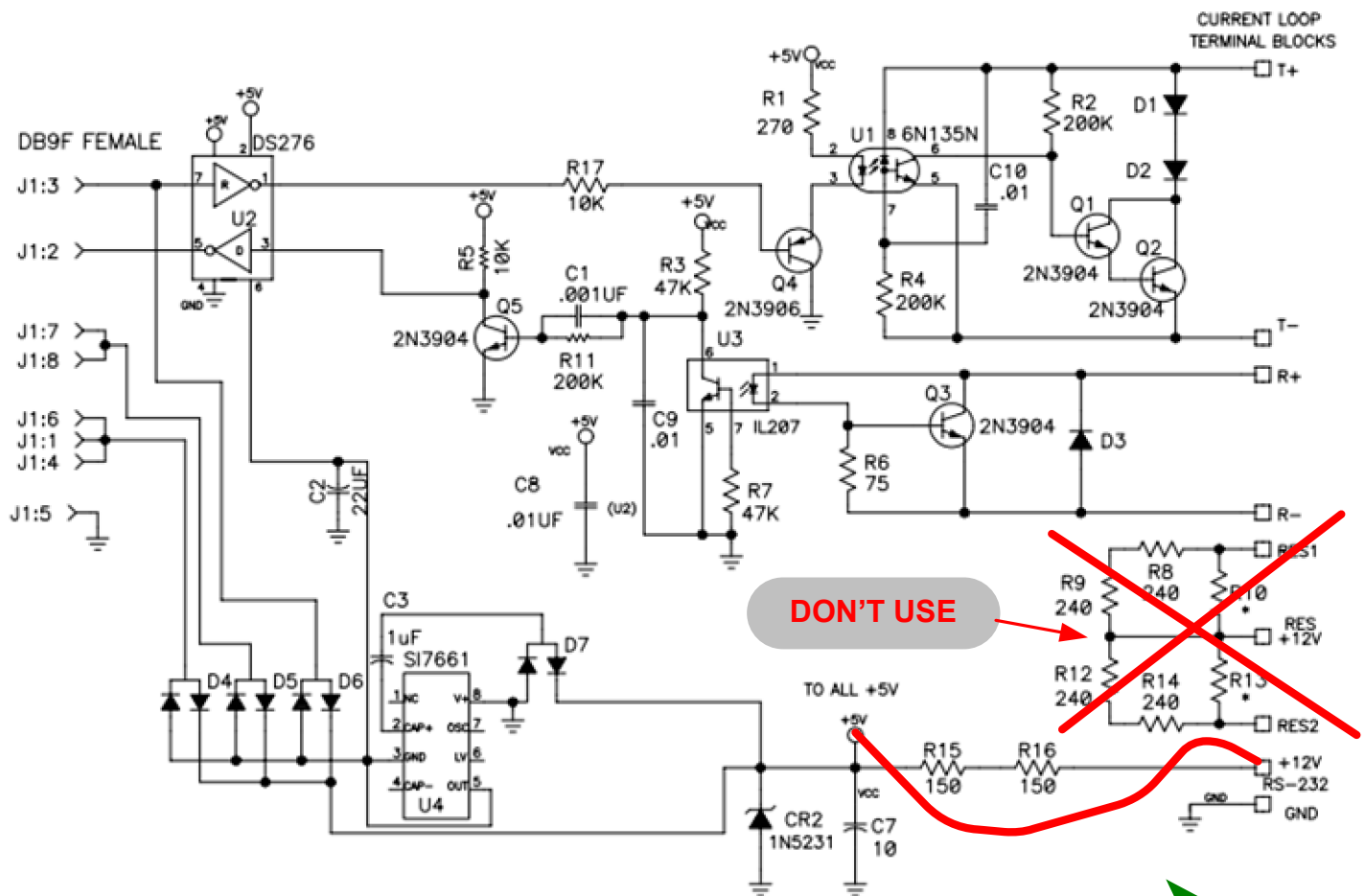
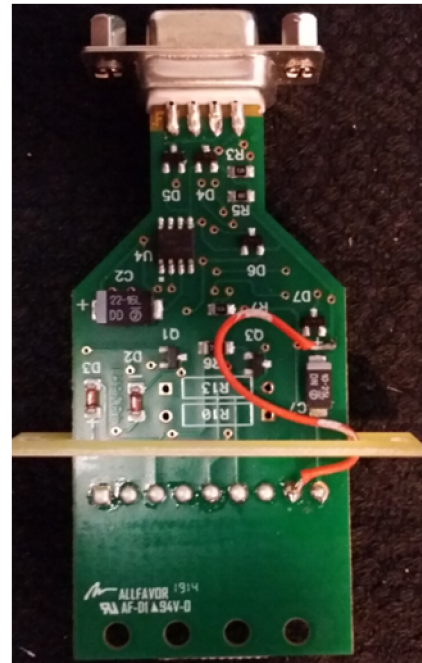
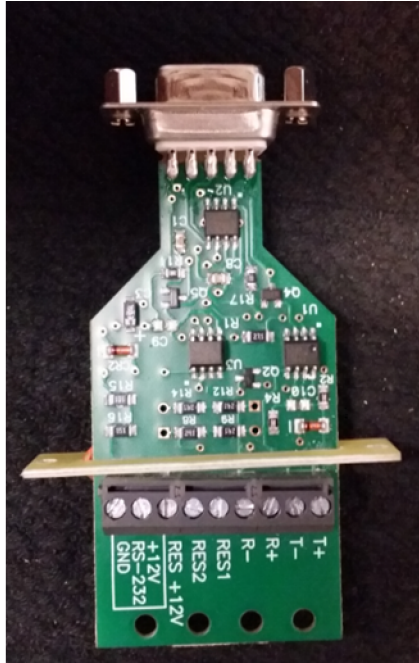
232CL9R



**TOSHIBA EX100 PLC
CPU: PU11A
PROGRAM PORT
(8 PIN FUJI)**



**PROJECT: THIRD PARTY, DIY REPLACEMENT OF THE OBSOLETE TOSHIBA PROGRAMMING CABLE
FOR THE EX100 CPU: PU11A and PU12 "CURRENT LOOP" MODEL: EX25GP232A-TIC2
USING A BnB 232CL9R CONVERTER- MODIFIED FOR 5 VDC POWERED BY THE PLC PORT**



SOLDER THIS JUMPER WIRE FROM THE +12V TERMINAL TO THE +5V SOLDER RING ON THE BOARD. DON'T NEED THE RESISTOR BANK AFTER THAT. WE JUST BYPASSED R15 AND R16.

Here is an overview using one of the diagrams from the BnB Manual

232CL9R0900 – pg. 1/2

9 Pin RS-232 to Current Loop Converter Model 232CL9R

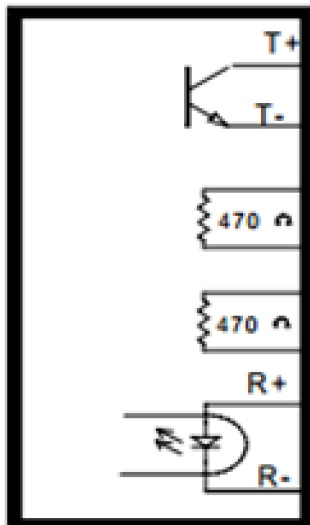
The Model 232CL9R is a passive 9 pin RS-232 to current loop converter.

~~This converter requires a 12VDC power supply at 100mA. Additional resistors are
supply for an active source.~~

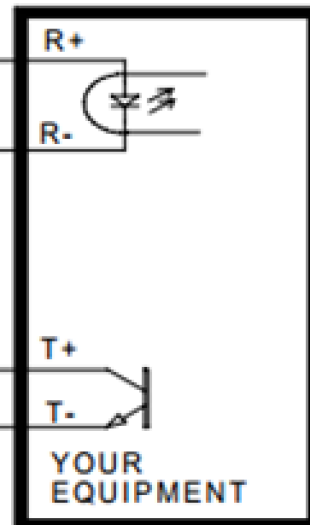


MODIFIED FOR 5 VOLT DC

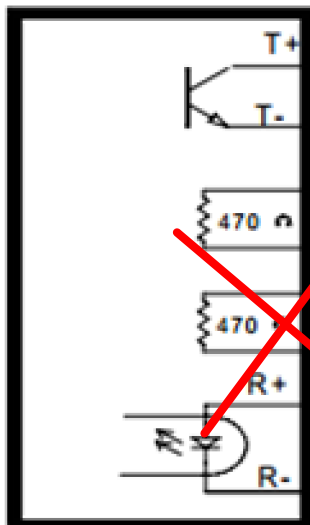
RS232 TO CURRENT
LOOP CONVERTER



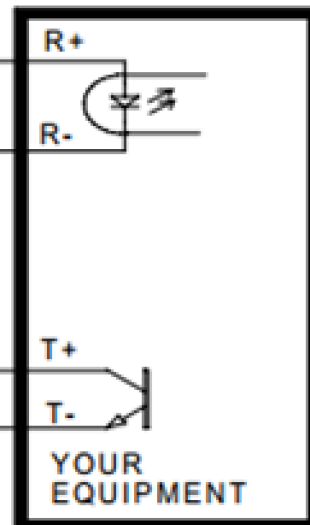
PASSIVE CURRENT
LOOP CONVERTER

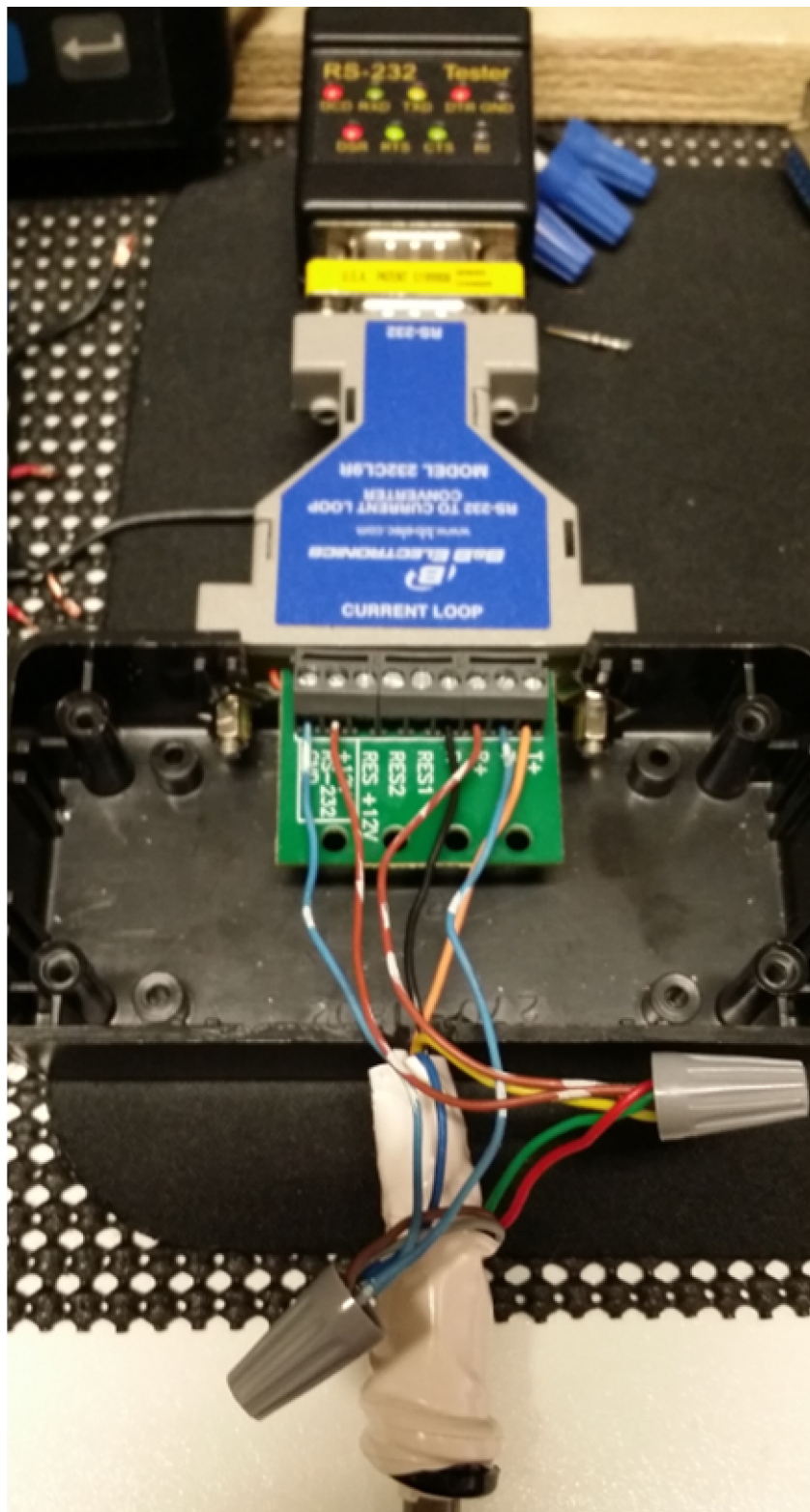


RS232 TO CURRENT
LOOP CONVERTER

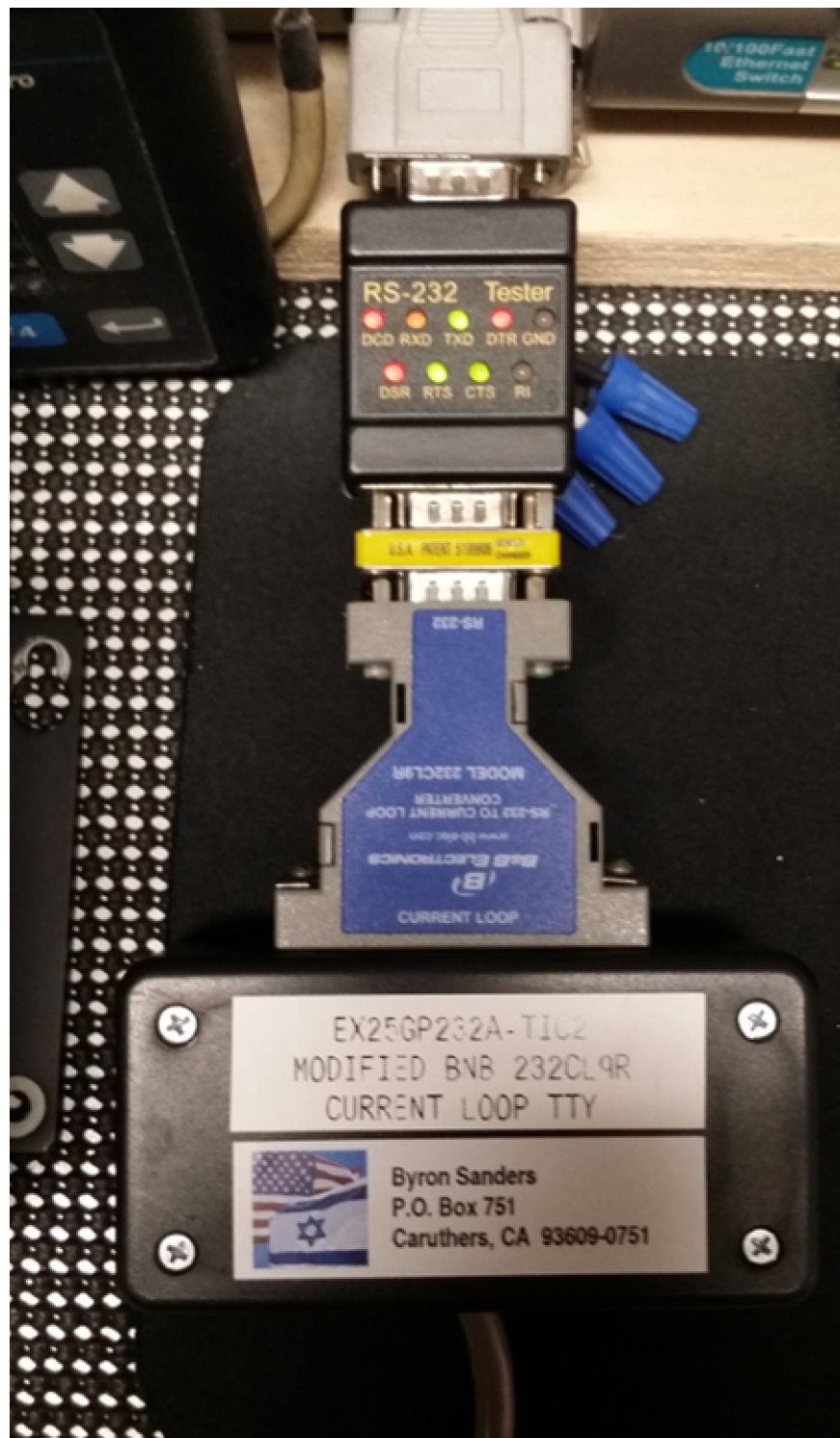


PASSIVE CURRENT
LOOP CONVERTER





In operation with laptop and PLC ONLINE, prior to putting cover on.



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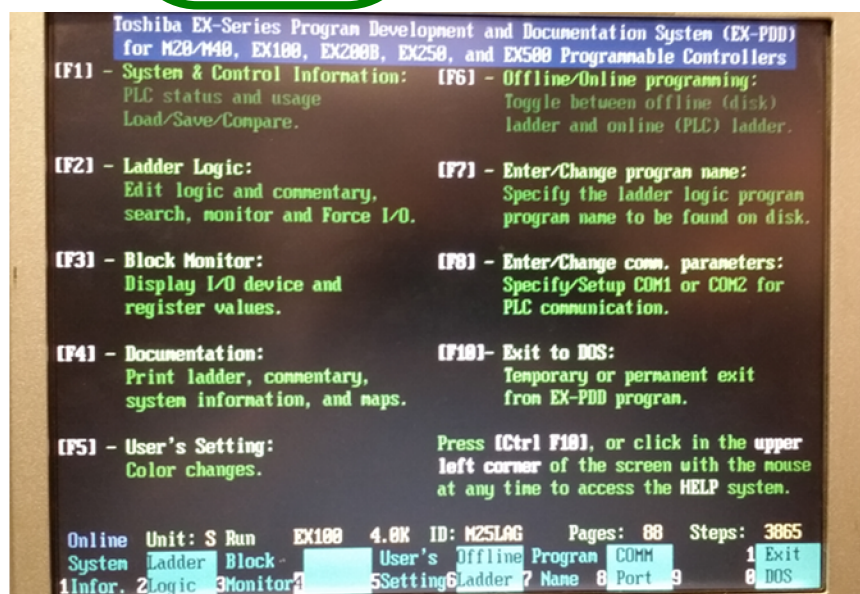
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