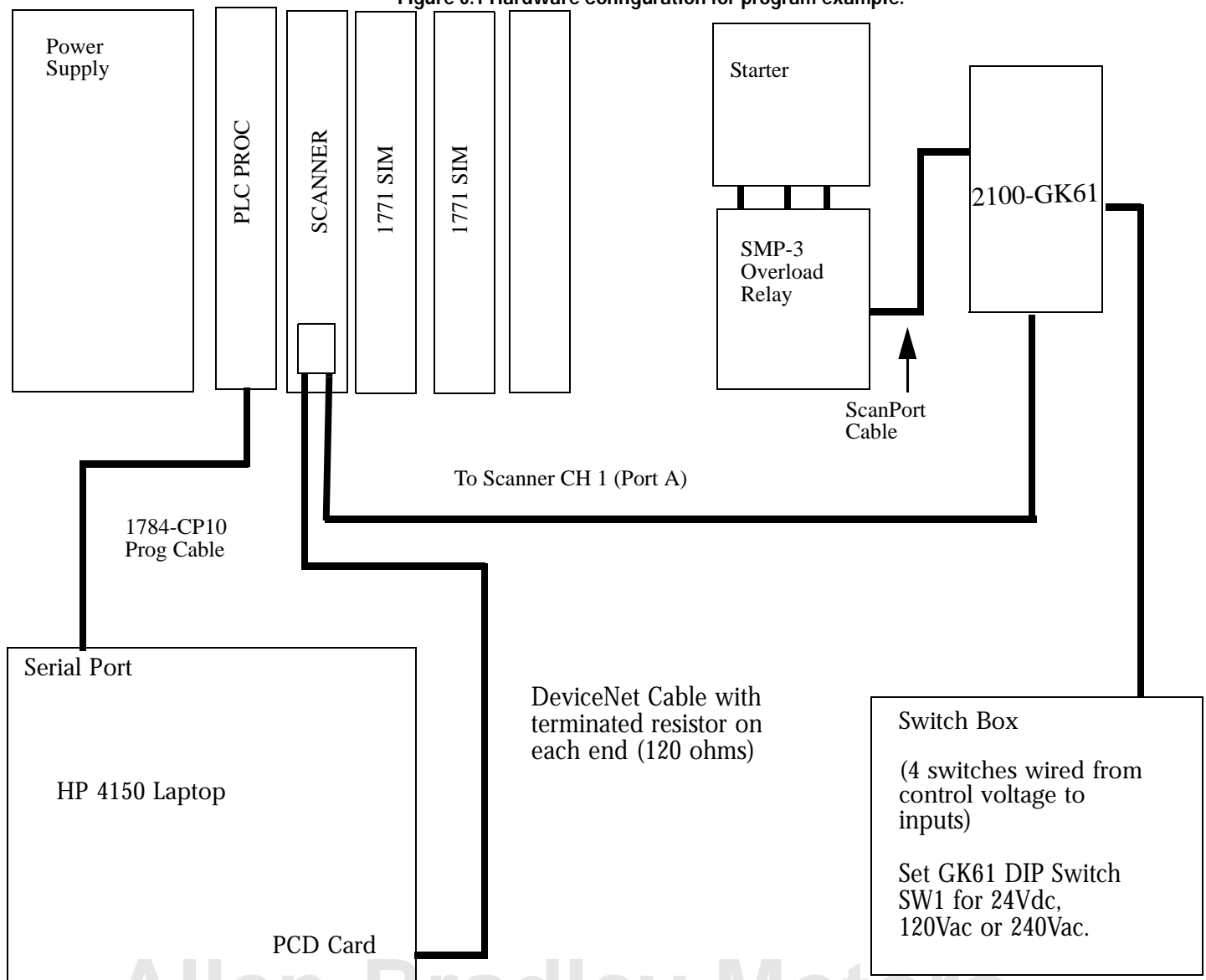




2100-GK61 2.001 Firmware Update Reading 2100-GK61 Inputs in I/O Stream

What Firmware Update Provides: The inputs of the 2100-GK61 can now be read as part of an I/O stream using a polled, change-of-state (COS), or cyclic method. An explicit messaging technique can still be used if desired. Input bits are located at the beginning of the Input Scan List and the monitoring technique is the same as it would be for any PLC discrete device. The input word size changes from 4 bytes to 6 bytes. The output word size remains at 4 bytes.

Figure 0.1 Hardware configuration for program example.



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Equipment used for example program:

PLC 4-slot chassis with:

- Processor Slot – PLC-5/20
- Slot 0 – 1771-SDN scanner
- Slot 1 – 1771-SIM card
- Slot 2 – 1771-SIM card
- External power supply

2100-GK61 DeviceNet to SCANport Communication Module with Digital Inputs

24V dc power supply

SMP-3 electronic overload relay

Laptop PC (HP 4150) with:

- 1784-PCD DeviceNet card
- PLC programming cable
- RSLinx software (communications drivers)
- RSNetworkx for DeviceNet software (for configuring 2100-GK61 and scanner)
- RSLogix 5 software (for programming PLC)

DeviceNet cable and 5 position connectors (for linking scanner, 2100-GK61 and PCD card)

ScanPort cable (for connecting 2100-GK61 and SMP-3) Part # 40121-487-02(A)

120 ohm terminating resistors (one at each end of cable across blue and white wires)

References:

[Pub 2100-UM001A-US-P DeviceNet to SCANport Communication Module with Digital Inputs](#)

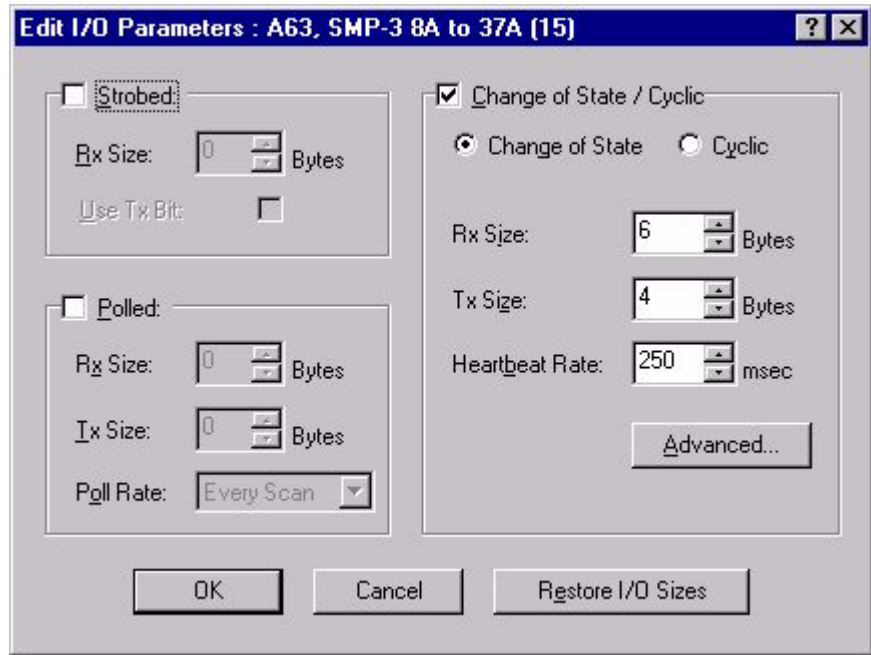
- Ch 4 – Configuring a Scanner to Communicate with the 2100-GK61 using RSNetworkx for DeviceNet.
- Ch 5 – Ladder Logic Programming. Focus is on Logic Control Data and Status Data.

[Pub 193-5.0 Bulletin 193/592 SMP-3 Solid-state Overload Relay User Manual](#)

- Chapter 6 – Serial Communication – information on Logic Control Data and Status Data

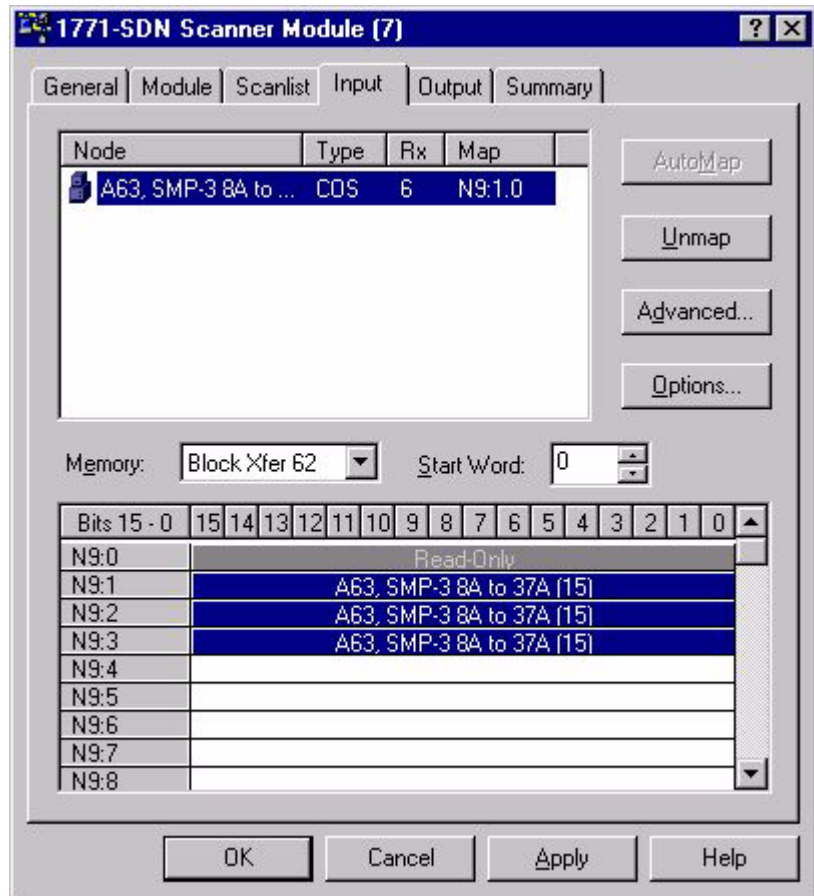
Setting Word Size in Scan List:

From RSNetworkx, click on Scanner, select “Edit I/O Parameters” and set Rx size to 6 Bytes and Tx size to 4 Bytes. Change of State is shown, but Polled or Cyclic may also be used.



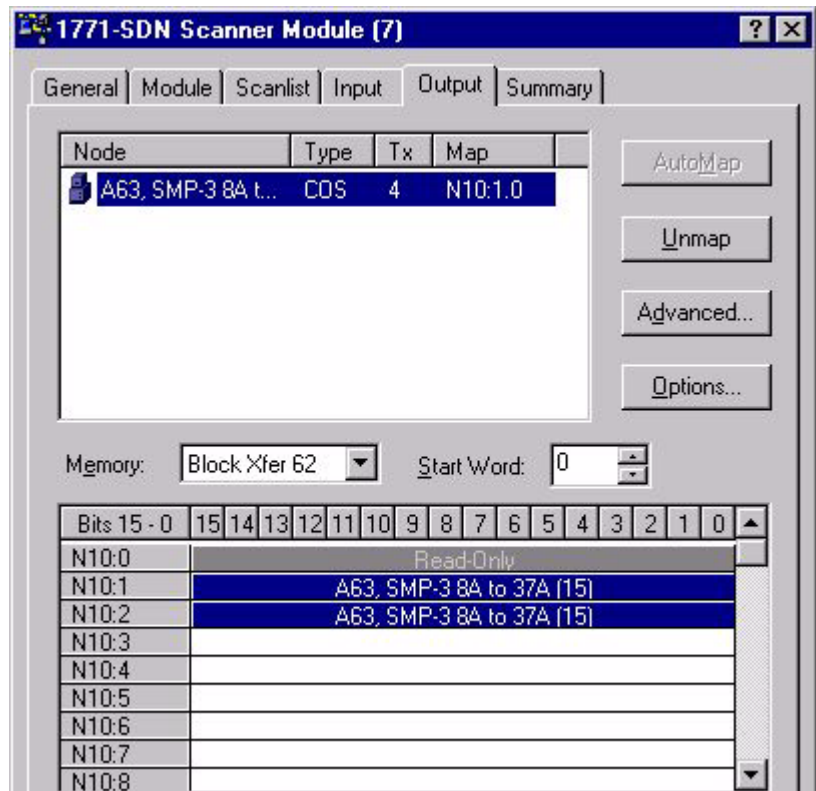
Scanner Module Input List:

Scanner inputs should be mapped as shown below. This example illustrates SMP-3 on Node 14. GK61 input data location is N9:1 bit 0 through bit 3. SMP-3 status data starts at N9:2 bit 0.

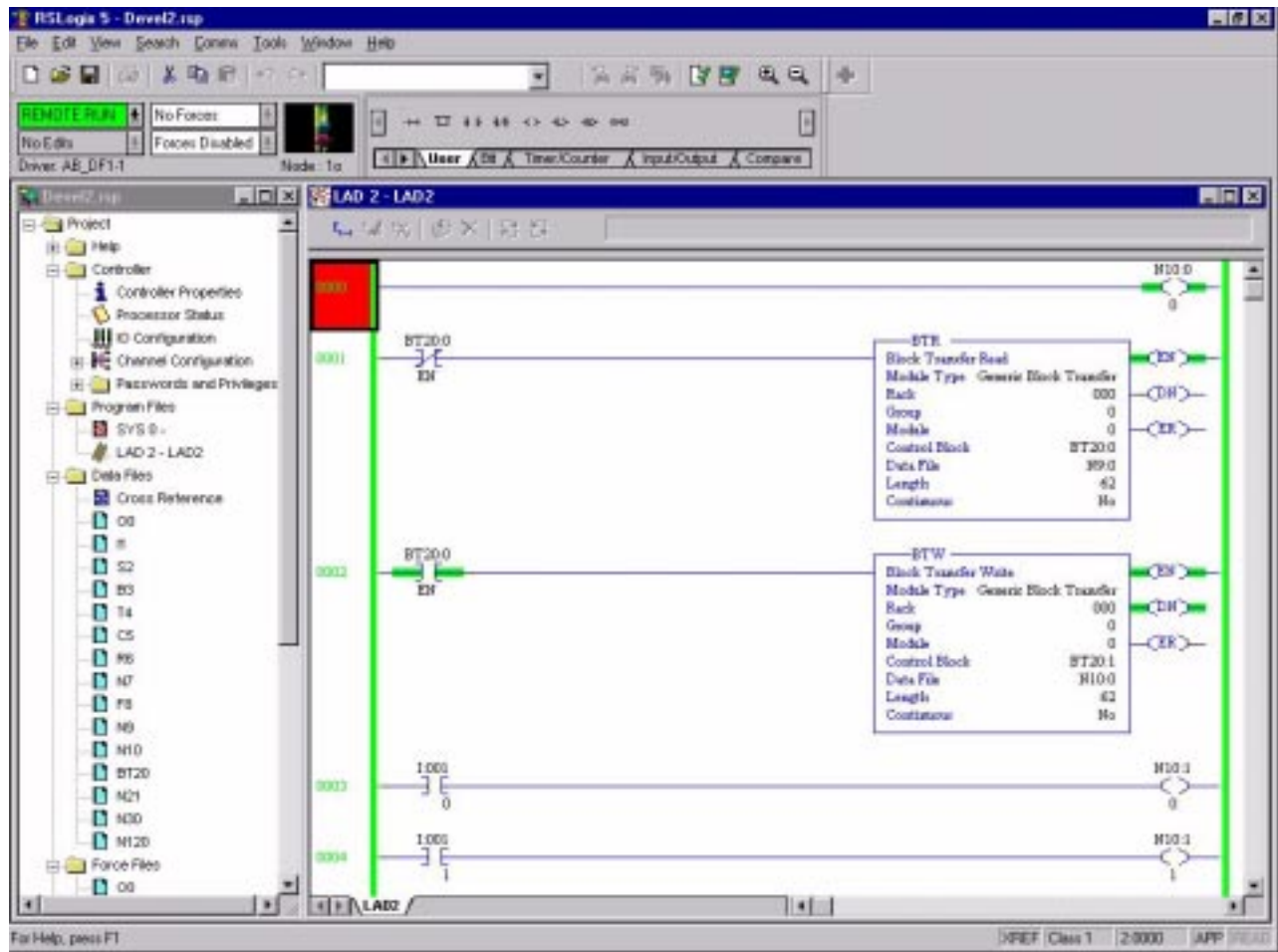


Scanner Module Output List:

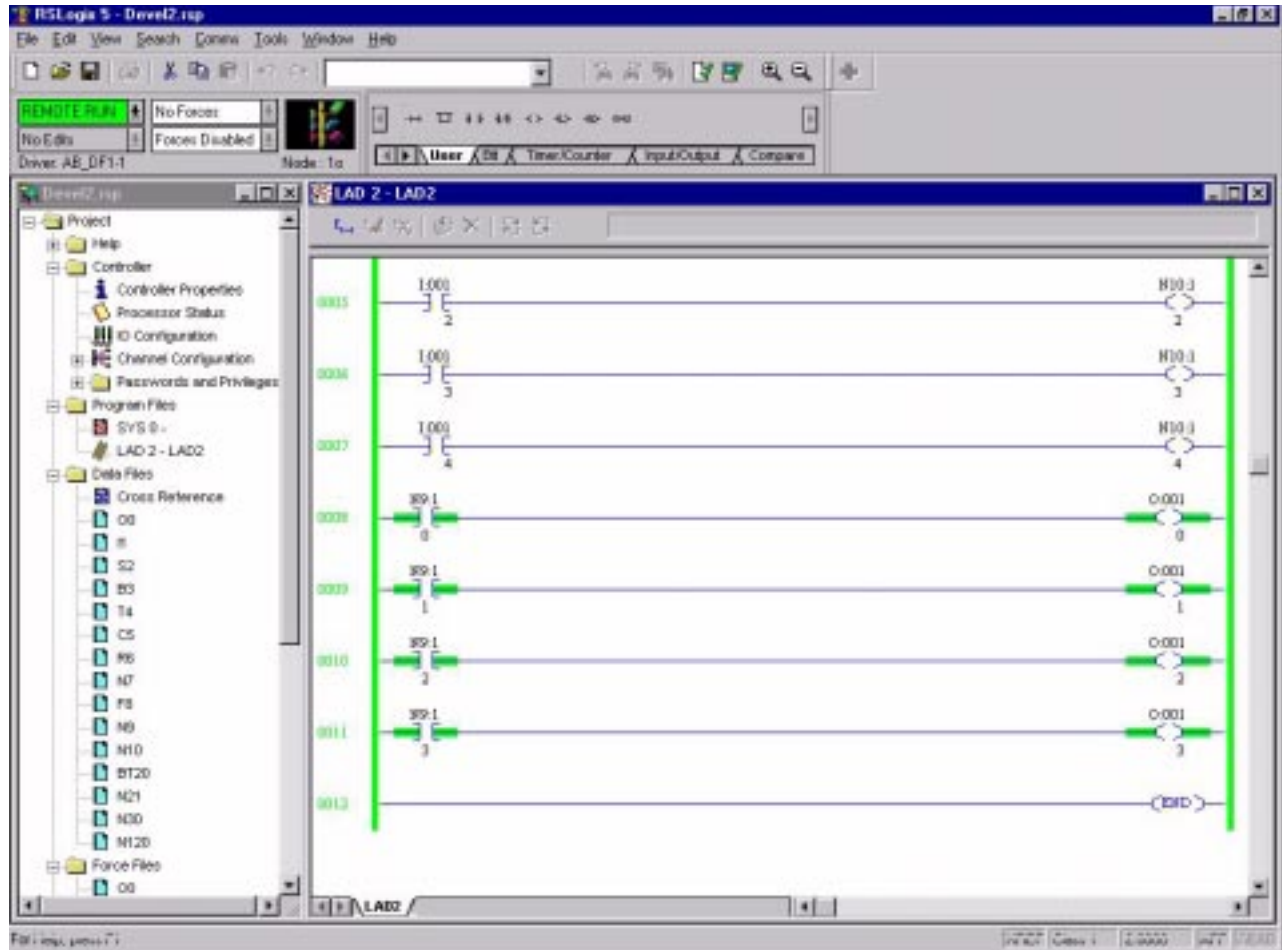
Scanner outputs should be mapped as shown below. This example illustrates a SMP-3 on Node 14. SMP-3 control data is located at N10:1 bit 0 through bit 15.



PLC Code: Rung 0 enables scanner; Rungs 1 and 2 are Block Transfer Read & Write. SMP-3 Output A is turned OFF when I:001/0 in Rung 3 is momentarily turned ON. SMP-3 output B is turned OFF when I:001/1 in Rung 4 is momentarily turned ON.

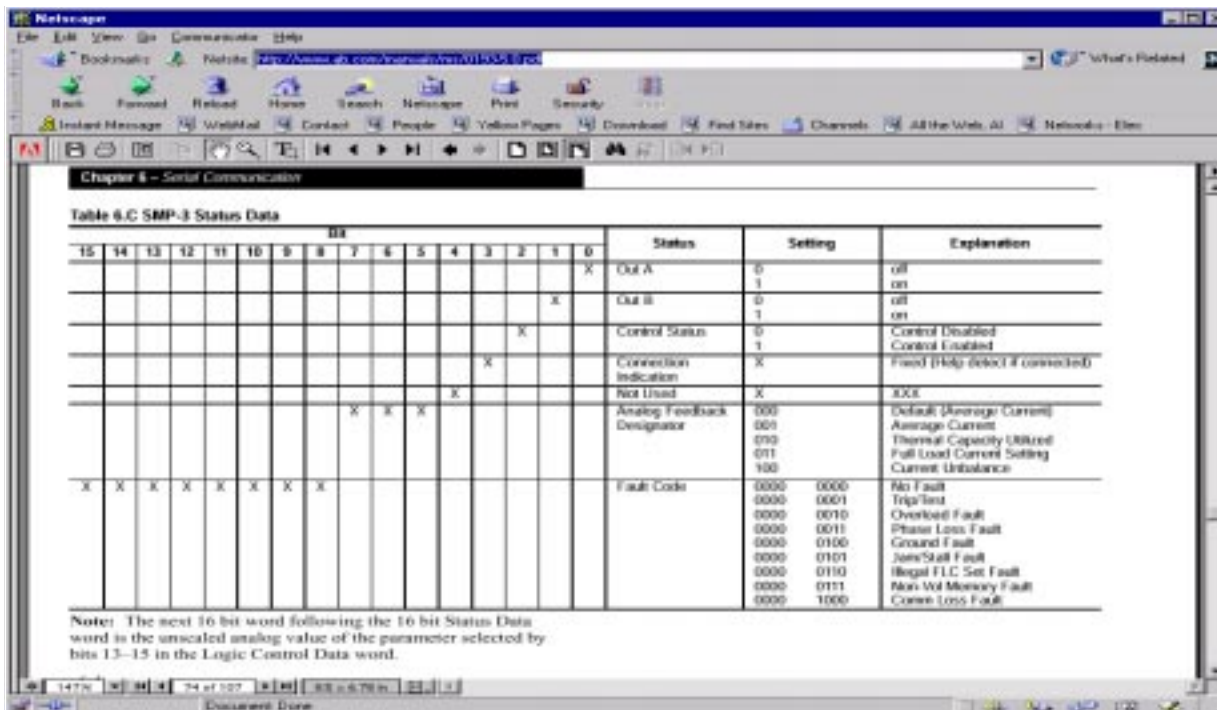
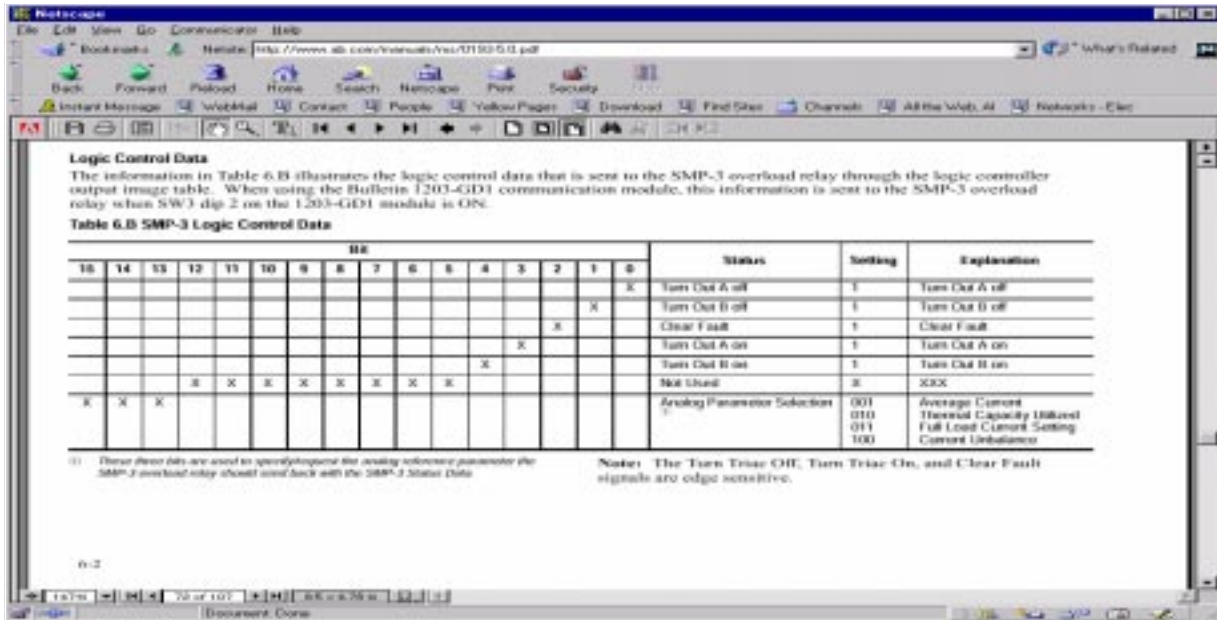


PLC Code: SMP-3 is RESET when I:001/4 in Rung 5 is turned ON. SMP-3 Output A is turned ON when I:001/3 in Rung 6 is momentarily turned ON. SMP-3 output B is turned ON when I:001/4 in Rung 7 is momentarily turned ON. Rungs 8-11 read GK61 inputs and turn on respective LED in SIM card located in PLC Chassis Slot 1.



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For Reference, Logic Control Data and Status Data tables from SMP-3 manual are included below.



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