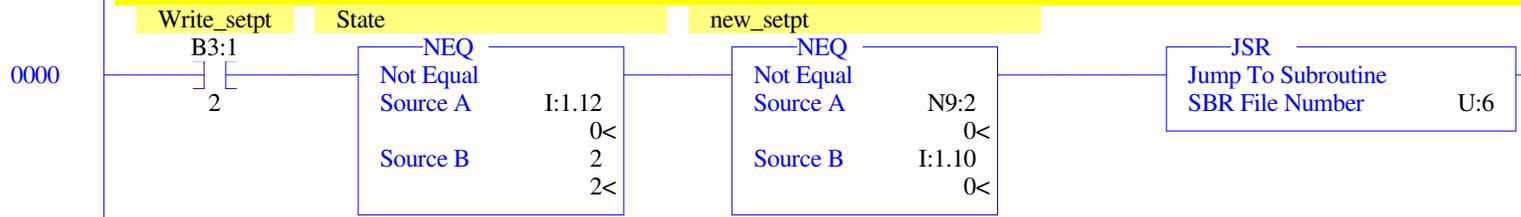


**Main Routine: To set a new setpoint.**

Rung 0 will allow the user to set a new rate setpoint. The rung will check to see if the unit is in manual mode and if not then check to see if the new setpoint is not equal to the current setpoint. If true, then will run the New Setpoint sub routine. User would place new setpoint value into N9:2 prior to running routine.



This rung will allow the user to select a command to run but latching one bit on. The command will run and once complete will unlatch all control bits.



This rung will allow the user to set a new manual output percentage. This will only be used if the unit is running in manual mode. The new output percentage should be placed in N9:1 prior to running this routine.



This routine will clear the totalizer.



This routine will allow the user to read the totalizer.

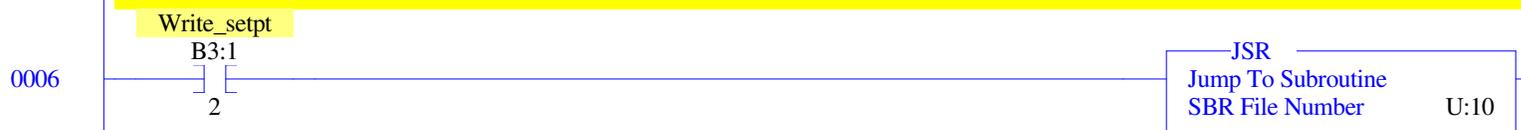


This routine will allow the user to write a parameter to the unit.

The new parameter value should be place into N9:3 and the Parameter ID number should be in N9:4 prior to running this routine.



This allows the user to read a parameter. The parameter ID number of the parameter to read should be placed in N9:4 prior to running this routine.

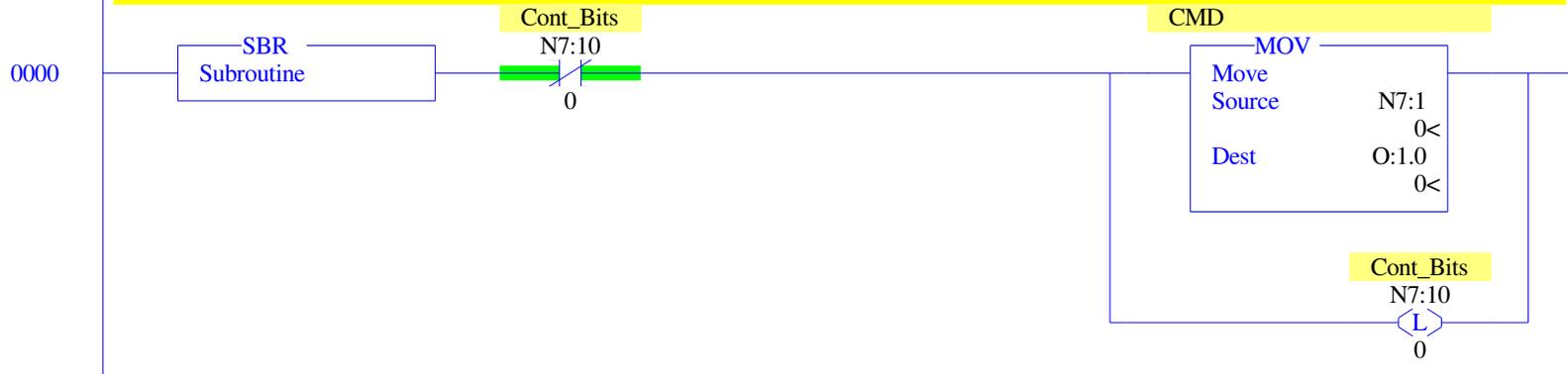


0007

⟨END⟩

**Run\_CMD:**

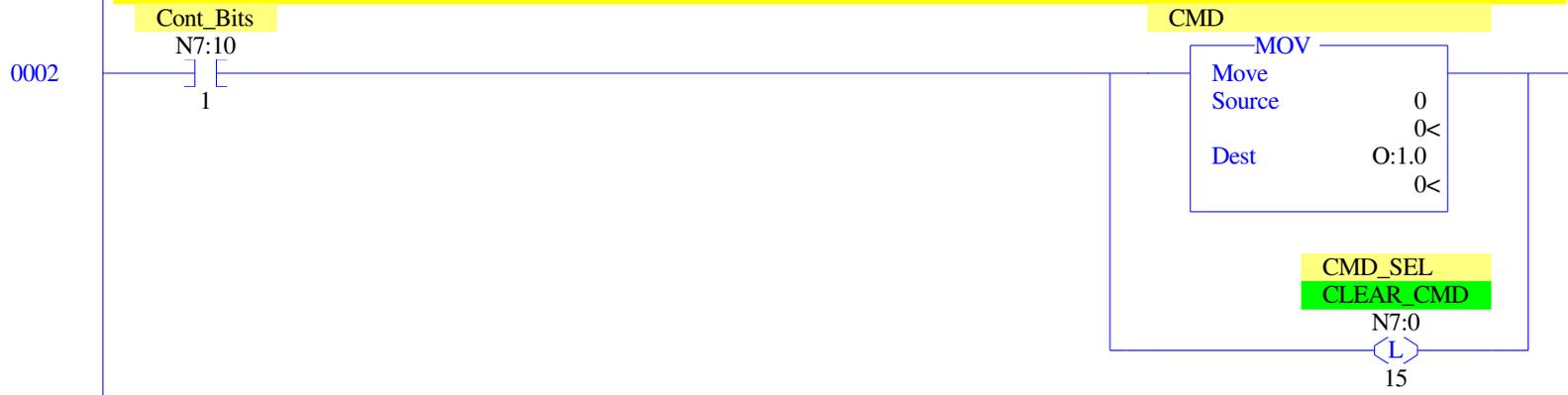
This routine is called by other routines to actually send the commands or values to the module.  
 This first rung will place the command number from N7:1 (placed by calling routine) into the output table to be sent to the module.



This rung will check to see if the return echo of the command matches the command being sent. When it matches the return data from the command is copied to data location N9:6 to N9:10. This will retain the return values so they can be checked in the event of a failure in the command.

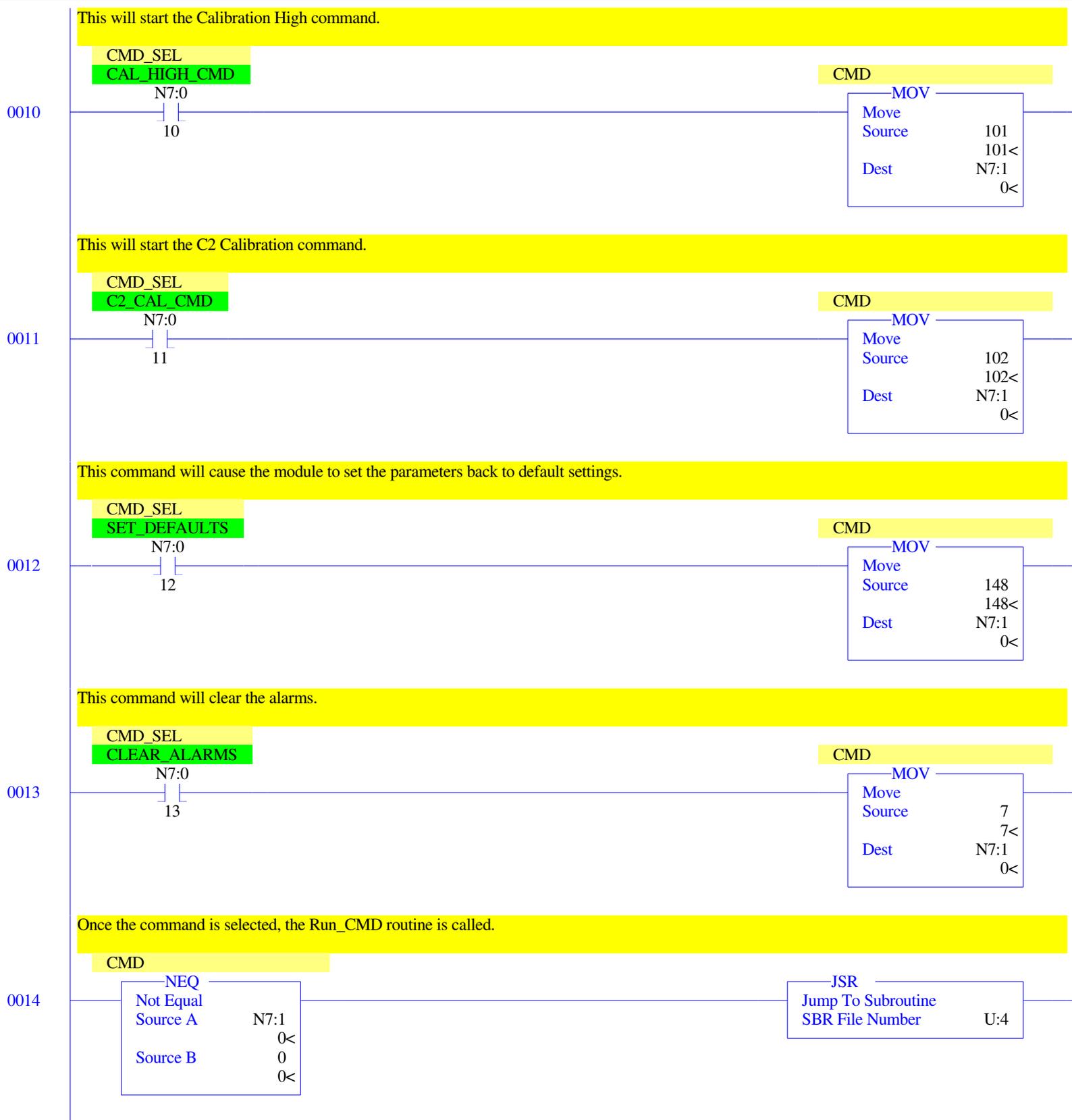


Once the return values have been saved, the routine will clear the command from the output table and send control back to the calling routine with a bit indicating it is done.









When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0015

CMD\_SEL  
CLEAR\_CMD

N7:0  
15

CMD

MOV  
Move  
Source 0  
0<  
Dest N7:1  
0<

Cont\_Bits

MOV  
Move  
Source 0  
0<  
Dest N7:10  
0<

CMD\_SEL

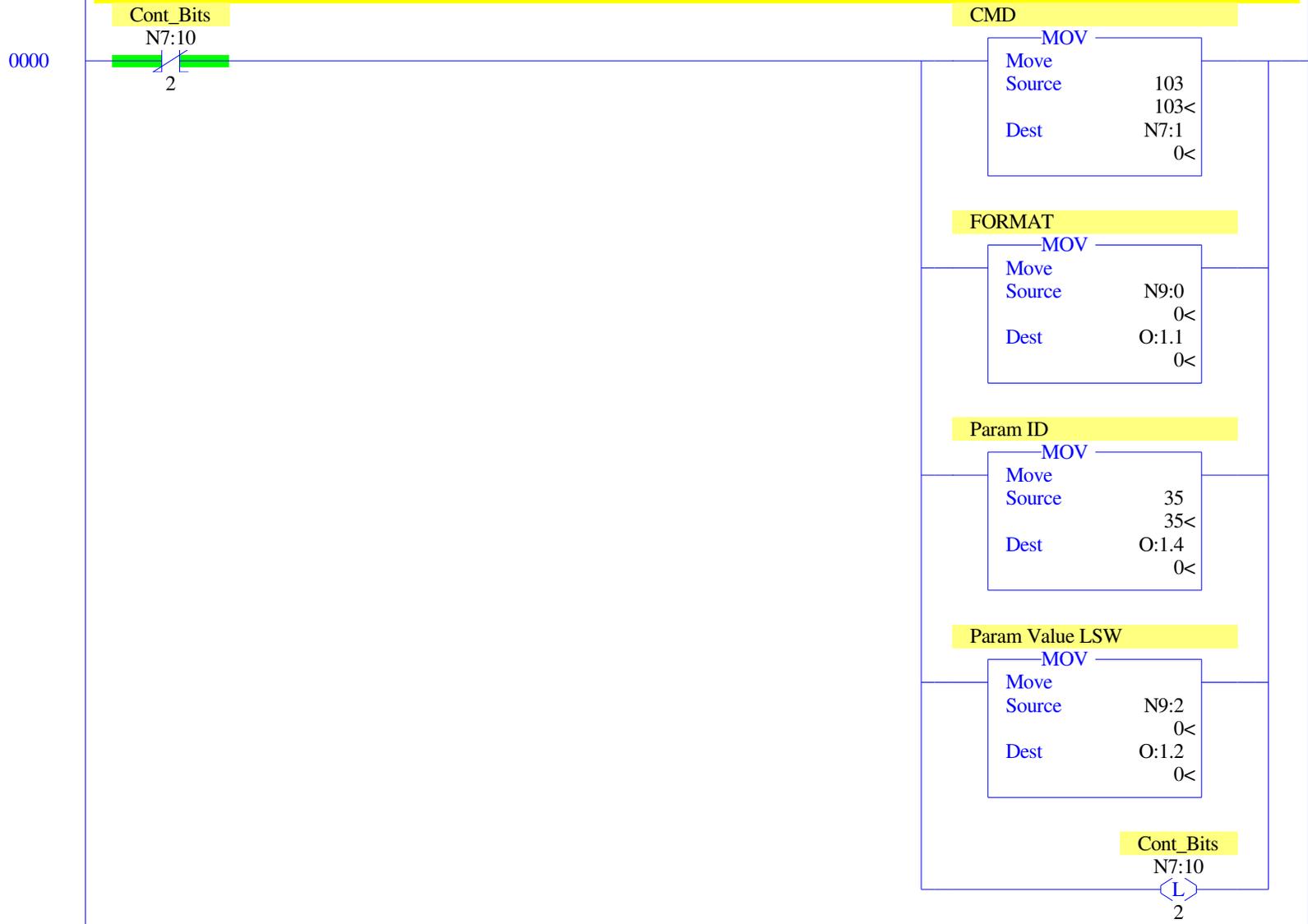
MOV  
Move  
Source 0  
0<  
Dest N7:0  
0<

0016

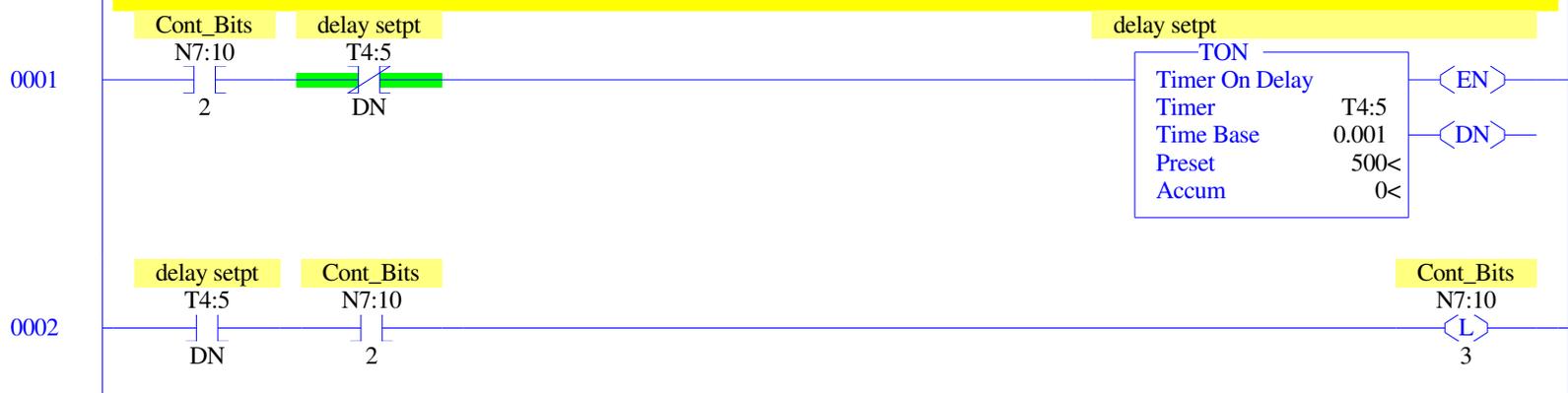
END

**New Setpoint:**

This rung will write the values needed for the command into the output table. The command number will be placed into N7:1 to be sent to the Run CMD routine.  
 For this command the new value will be placed into N9:2.  
 Since this is a routine for setting the setpoint, the parameter ID number is hard coded as 35. This could as easily been done using the Write Param routine and place the parameter ID into the appropriate location.



This rung starts a delay timer just to give the processor enough time to finish copying all the values to their locations.



Once the delay has passed, the Run\_CMD routine is called.

0003

Cont\_Bits

N7:10

3

JSR  
Jump To Subroutine  
SBR File Number U:4

When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0004

CMD\_SEL

CLEAR\_CMD

N7:0

15

CMD

MOV  
Move  
Source 0  
0<  
Dest N7:1  
0<

delay setpt

T4:5

RES

Cont\_Bits

MOV  
Move  
Source 0  
0<  
Dest N7:10  
0<

CMD\_SEL

MOV  
Move  
Source 0  
0<  
Dest N7:0  
0<

Write\_setpt

B3:1

U

2

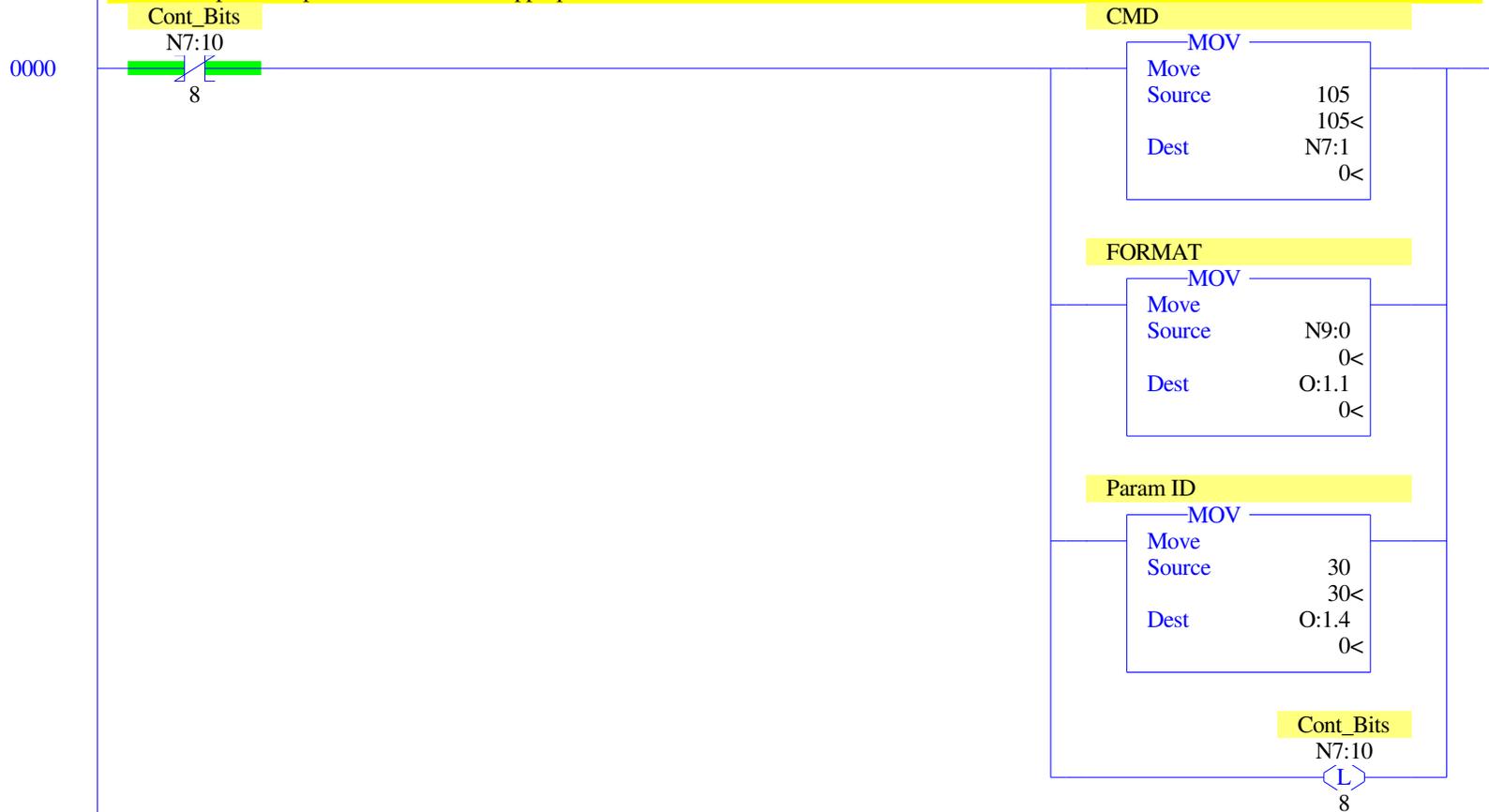
0005

END

**Read Total:**

This rung will write the values needed for the command into the output table. The command number will be placed into N7:1 to be sent to the Run CMD routine.

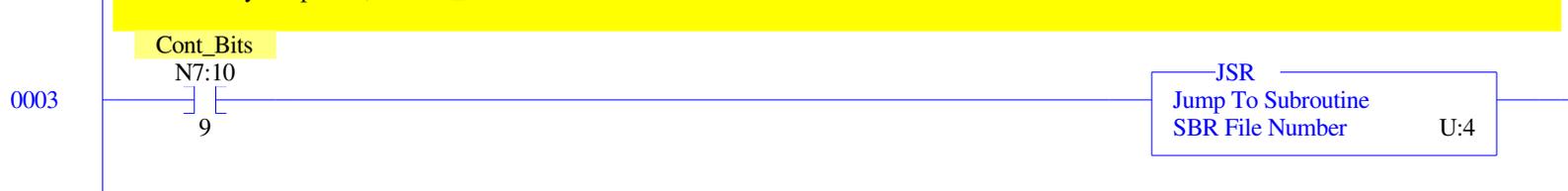
Since this is a routine for reading the total, the parameter ID number is hard coded as 30. This could as easily been done using the Read Param routine and place the parameter ID into the appropriate location.



This rung starts a delay timer just to give the processor enough time to finish copying all the values to their locations.



Once the delay has passed, the Run\_CMD routine is called.



When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0004

CMD\_SEL

CLEAR\_CMD

N7:0

15

CMD

MOV

Move	
Source	0
	0<
Dest	N7:1
	0<

Total

COP

Copy File	
Source	#N9:8
Dest	#N9:5
Length	1

Delay read total

T4:2

< RES >

Cont\_Bits

MOV

Move	
Source	0
	0<
Dest	N7:10
	0<

CMD\_SEL

MOV

Move	
Source	0
	0<
Dest	N7:0
	0<

Read\_Total

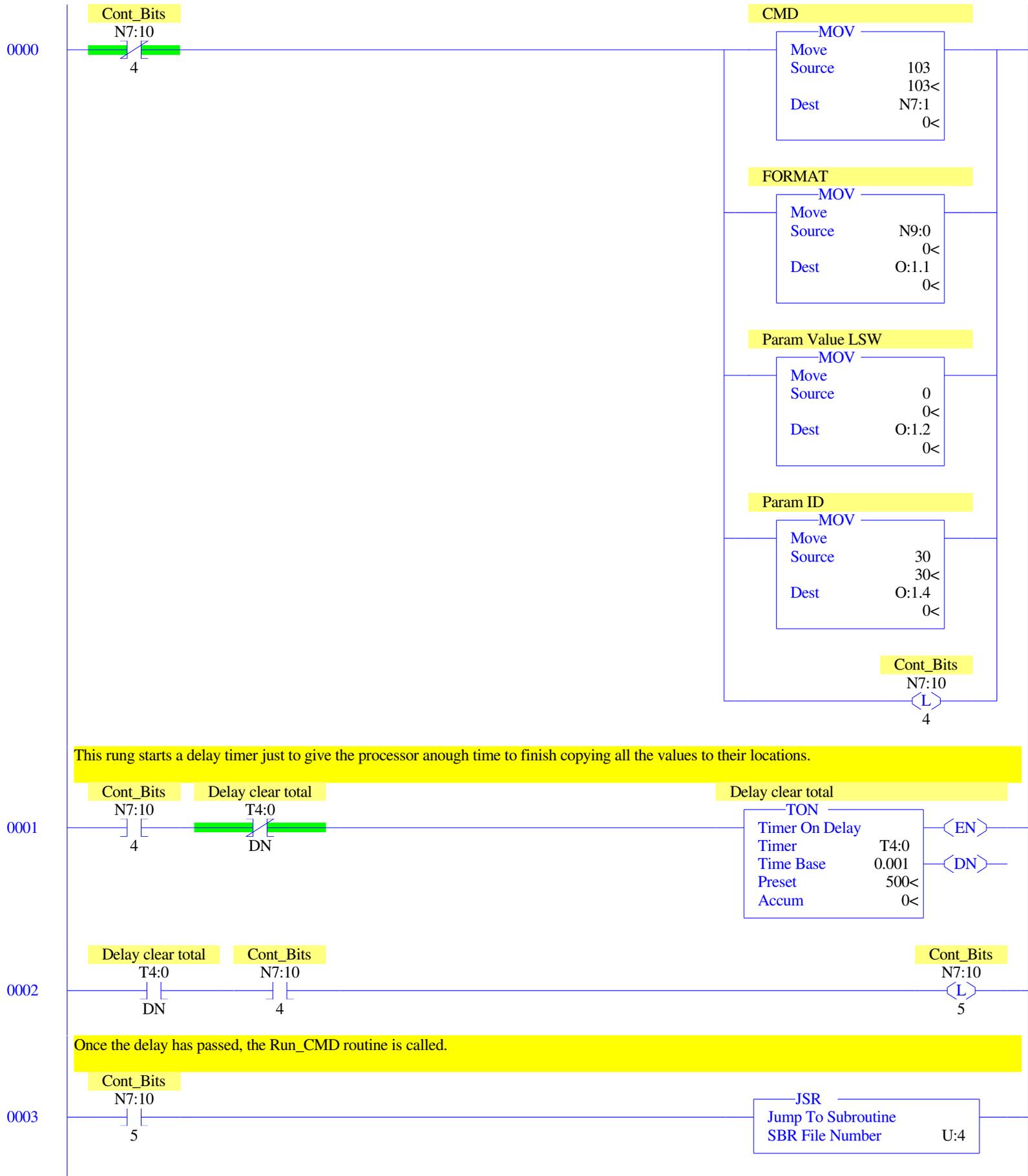
B3:1

< U >

5

0005

< END >



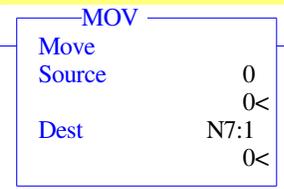
When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0004

CMD\_SEL  
CLEAR\_CMD



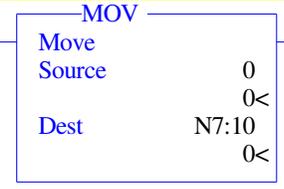
CMD



Delay clear total



Cont\_Bits



CMD\_SEL

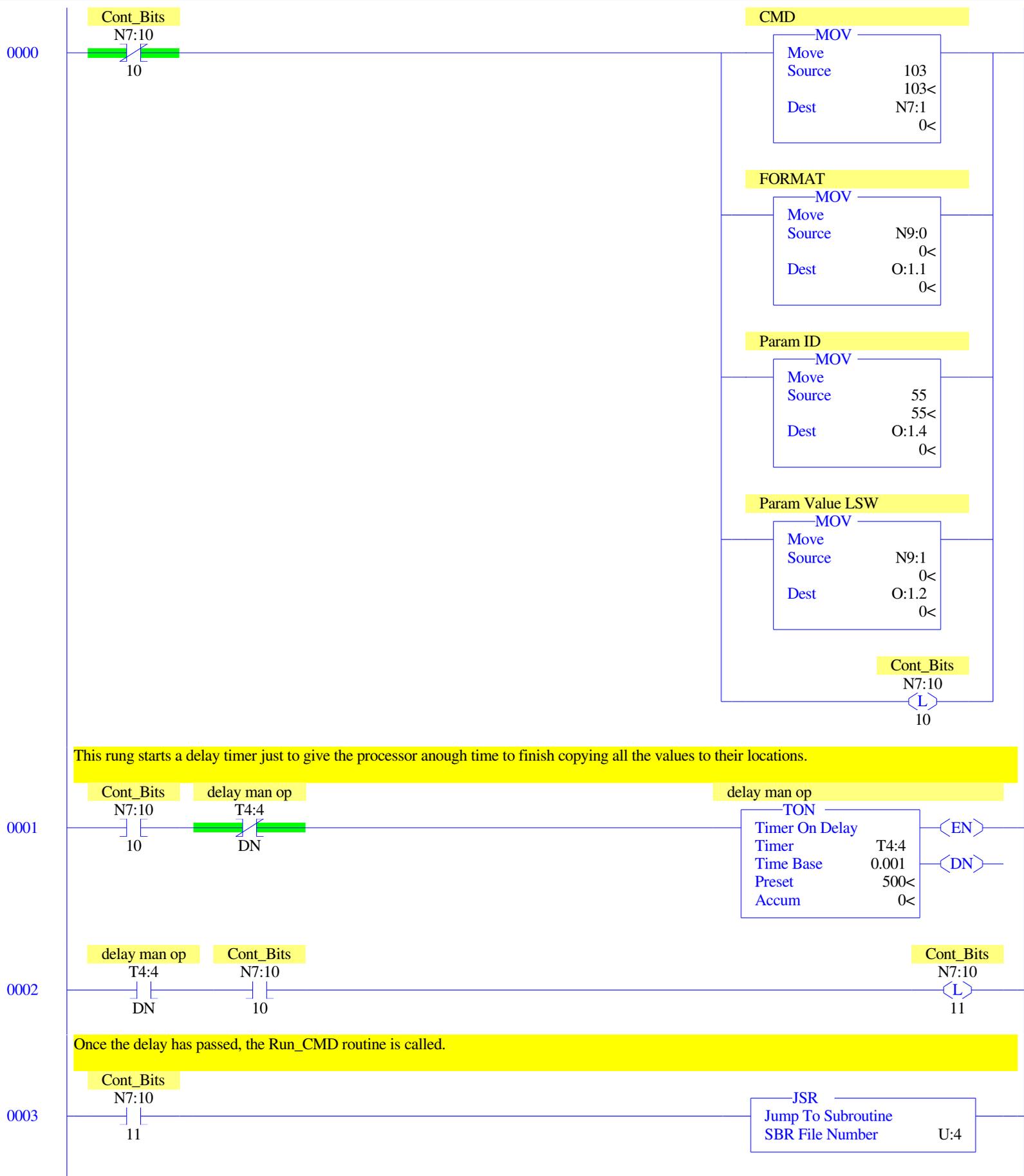


clear\_total



0005





This rung starts a delay timer just to give the processor enough time to finish copying all the values to their locations.

Once the delay has passed, the Run\_CMD routine is called.

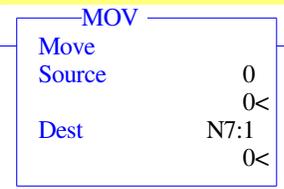
When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0004

CMD\_SEL  
CLEAR\_CMD



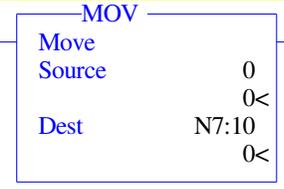
CMD



delay man op



Cont\_Bits



CMD\_SEL

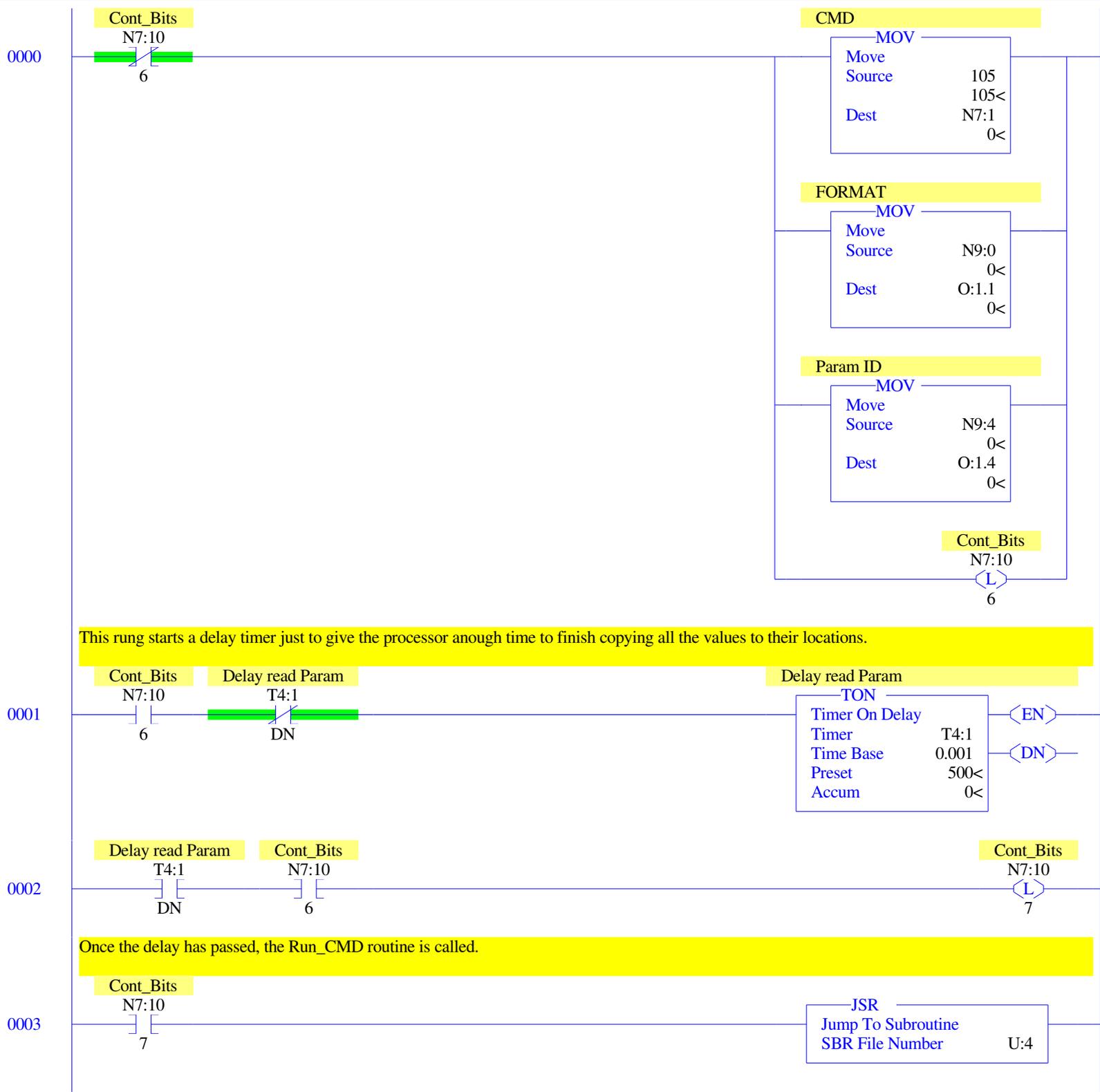


Set\_man\_OP



0005





This rung starts a delay timer just to give the processor enough time to finish copying all the values to their locations.

Once the delay has passed, the Run\_CMD routine is called.

When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0004

CMD\_SEL  
CLEAR\_CMD

N7:0  
15

CMD

MOV  
Move  
Source 0  
0<  
Dest N7:1  
0<

Delay read Param  
T4:1  
<RES>

Cont\_Bits

MOV  
Move  
Source 0  
0<  
Dest N7:10  
0<

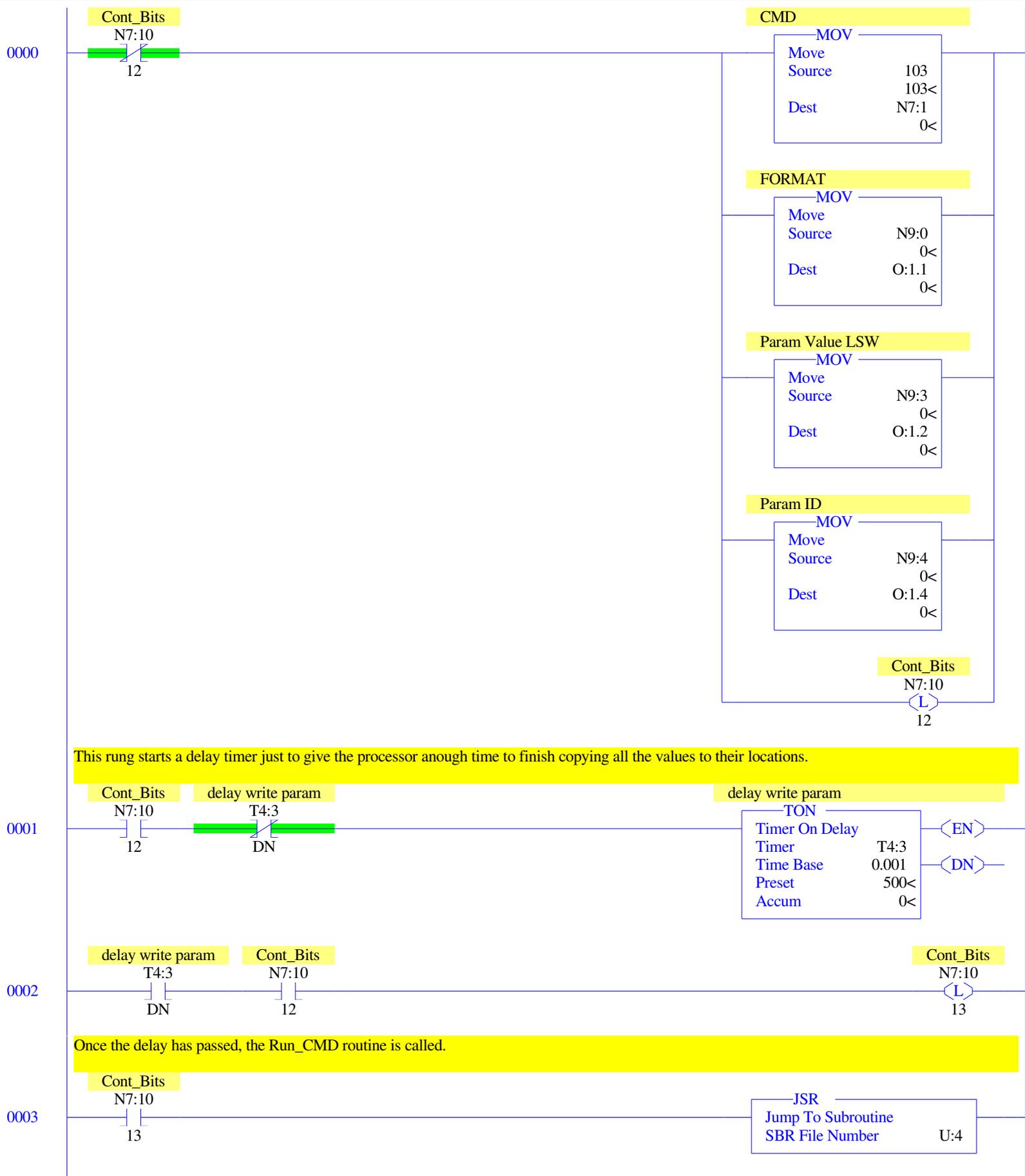
Cont\_Bits

MOV  
Move  
Source 0  
0<  
Dest N7:10  
0<

Read\_param  
B3:1  
<U>  
4

0005

<END>



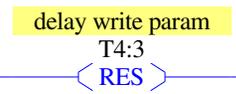
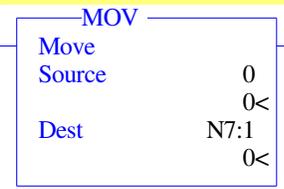
When the RUN\_CMD routine passes control back to this routine, this rung will clear the control bits for this routine.

0004

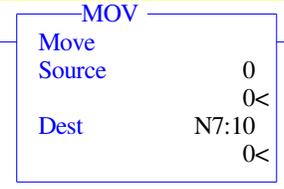
CMD\_SEL  
CLEAR\_CMD



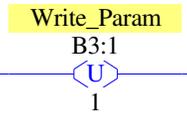
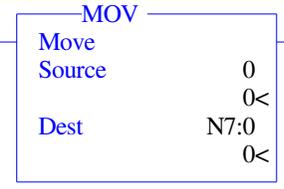
CMD



Cont\_Bits



CMD\_SEL



0005

