

TB142 (Rev1) - Modifying PLCIO2 based PLC Programs

...for v8.00+ Rapid Override Function Key

Overview

Starting with software version v8.00, a new feature has been added that places an F7 function key in CNC7 software when in MDI mode or otherwise running a job. It is intended that the F7 key can be used to toggle the rapid override state and also work in conjunction with a jog panel-PLC-program combination if this combination is already present. For existing PLCIO2 based systems, the F7 key will not work as control of the rapid override state because the PC side PLC program controls it. This situation can be remedied by modifying the CPU7 side PLC program to control the rapid override state.

Modifying the CPU7 side PLC program

The CPU7 side PLC program is found in the C:\PLC directory and has an extension of .SRC. Note that in PLCIO2-based systems, there are at least two .SRC files. To identify which one is the CPU7 side PLC program, look for the .SRC file to have a filename that includes the string "CPU", such as ATC10CPU.SRC, V3ECCPU.SRC, or HCNCCPU.SRC. Other ways to determine the CPU7 side PLC program are to look at the header comments in C:\CNC7\CNC7.PLC, or to edit the source code file and look at the program syntax. CPU7 program lines have the form PLC_BIT = ..., whereas the PC side PLC programs have the form IF ... THEN

Once the correct CPU7 side PLC program is located, edit the file and make the following changes:

In the memory definition section of the source code, add the following line:

```
Last_rapid_over_key IS MEM73
```

In the program section, remove the line

```
Rapid_override = PC_Rapid_override
```

and replace it with these lines:

```
Rapid_override = Rapid_override XOR ( Rapid_over_key AND
```

```
/ Last_rapid_over_key )
```

```
Last_rapid_over_key = Rapid_over_key _
```

Save the file with a new name in case there are problems. For example, it will be assumed that the original file

was ATC10CPU.SRC and the new file was named ATC10CP2.SRC. Recompile the PLC program:

```
C:\PLC>plccomp atc10cp2.src
```

There should be output to the screen that compilation was successful. Now, copy the .PLC program to the C:\CNC7 directory. Note that for lathe systems, the PLC file is copied to C:\CNC7T

```
C:\PLC>copy atc10cp2.plc \cnc7\cnc7.plc
```

At this point the CNC7 software can be restarted or the system can be rebooted. The rapid override F7 key should now toggle the rapid override state and so should the jog panel rapid override key.

Document History

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