



## Use of M198 External Serial Subprogram Call on a Fanuc 15MA

This setup enables an M198 external subprogram call function in an executing CNC part program file. The M198 calls out serially to our NetDNC software, thus allowing for the DNC software to drip feed the remote file into the CNC (with it being executed) and eventually returning control to the originating CNC file at the end.

### M198 CNC OPERATION:

```
%  
(O1234)  
N1 ...  
N2 M198P9001      ← Note that L parameter shouldn't be used here  
NetDNC Serially Sees:  
    []&FAO9001   :  
NetDNC Decodes Floppy Cassette Command and Sends O9001  
    %  
    O9001  
    ...  
    M30      ← May have to be an M99 here  
    %
```

CNC continues after the M198 Call With N3 of the original program.

```
N3 ...  
M30  
%
```

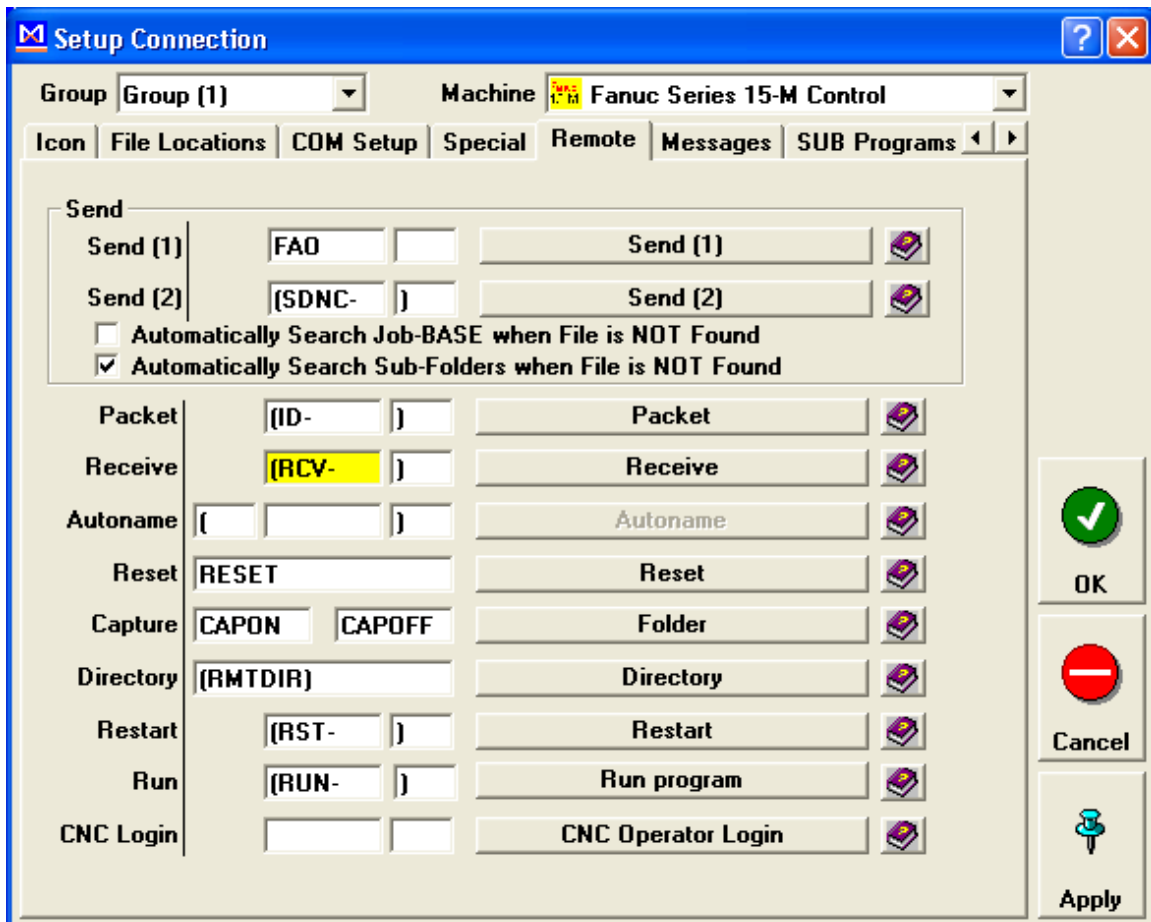
- Parameters 20, 21, 22 & 23=1 to use interface 1
- 5001=1 to use interface 1
- 5110=8 (for Floppy Cassette Protocol, Program File Mate setting) \*\*\*
- 5111=2 for 2 stop bits
- 5112=11 for 9600 baud (max is 19200 or 12 for FS15MA)
- 2404.5=0 (SFLE) to enable program number in external M198 call \*\*\*
  - Punch out is “[ ]&FAO9001 :” ← Uses the letter “O” here not zero
- 2431 =0 for use of M198 for subprogram call \*\*\*
- 7616.3=1 (EXSC) to enable M198 remote memory call \*\*\*
- Set NetDNC
  - no BOF nor EOF set \*\*\*
  - 20 second timeout on close (longer than normal)
  - XON/XOFF (depending upon cable)
  - Use 2 stop bits to add delay in bytes (recommended)

- Even parity as usual for a Fanuc
- 9600 BAUD in this case
- No Wait for XON (set to none) – Check this as wait for XON is normal
- Call file SEND(1) needs to set on “FAO” and a **blank space** for the end  
\*\*\*
- Reset port abort was set to RESETPORT here

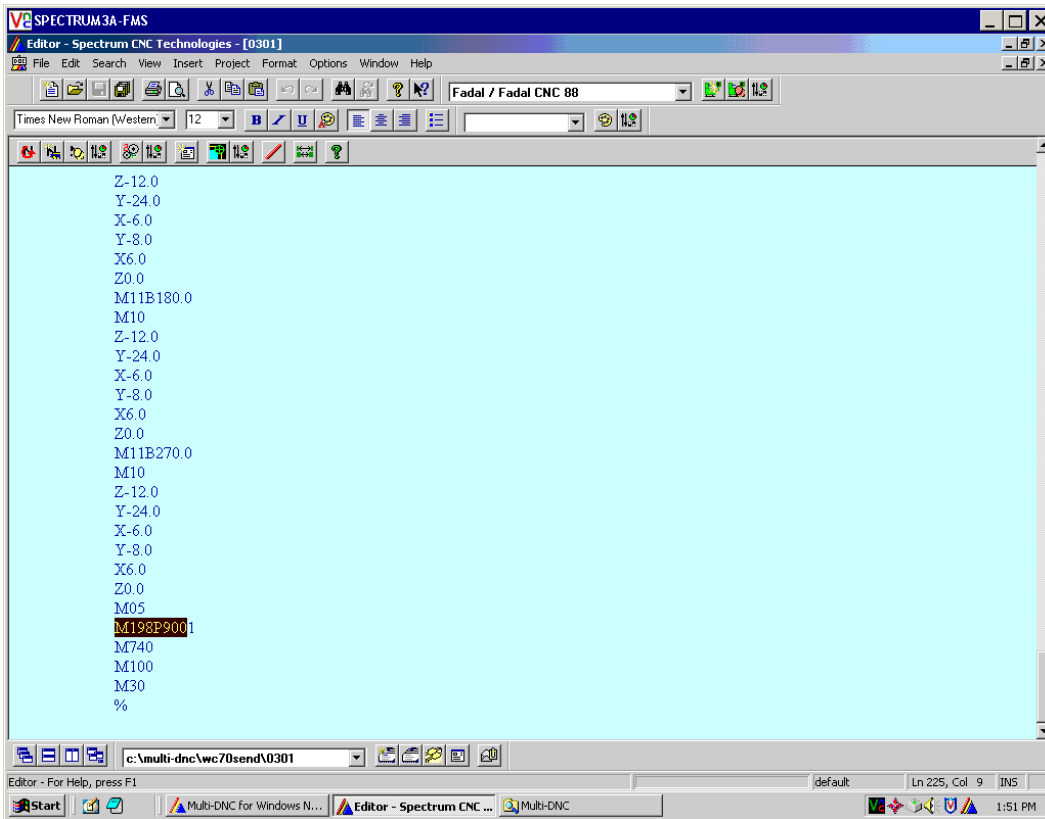
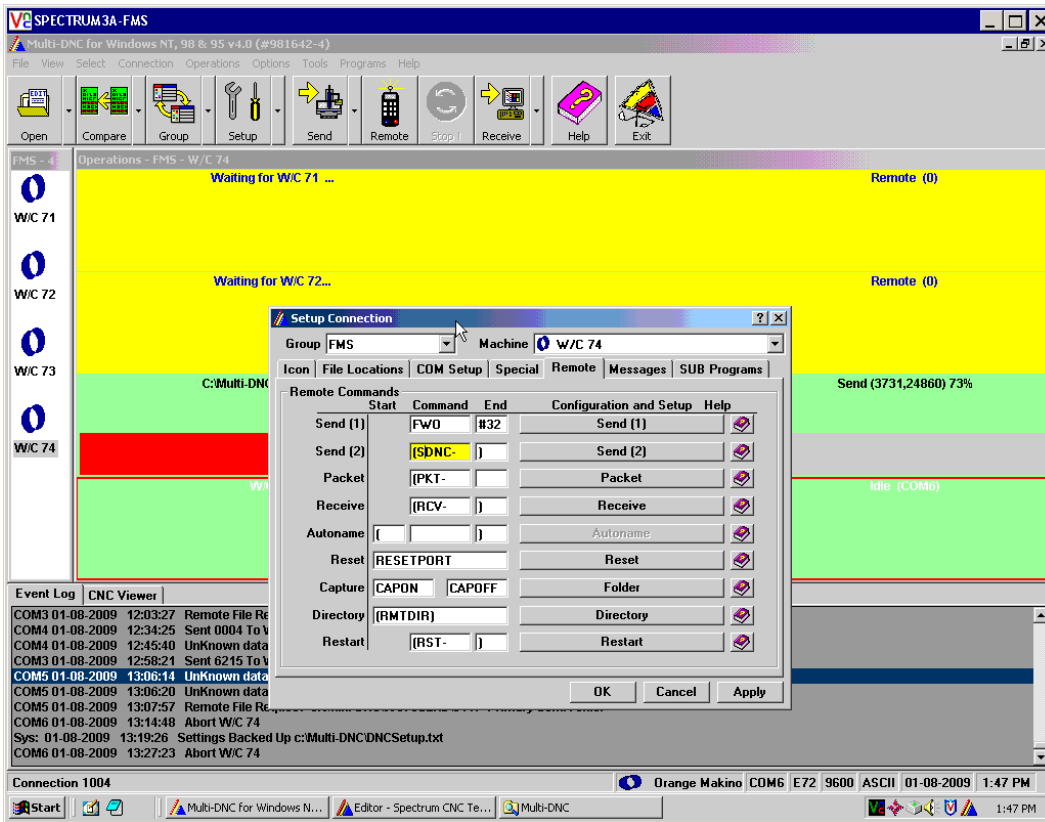
Note: M198 cannot be used in DNC mode (going to the CNC) but it can be used from the CNC to the PC with the above settings. If there are M198 (or G65s) in a DNC file, use NetDNC’s Sub-Program Expand feature.

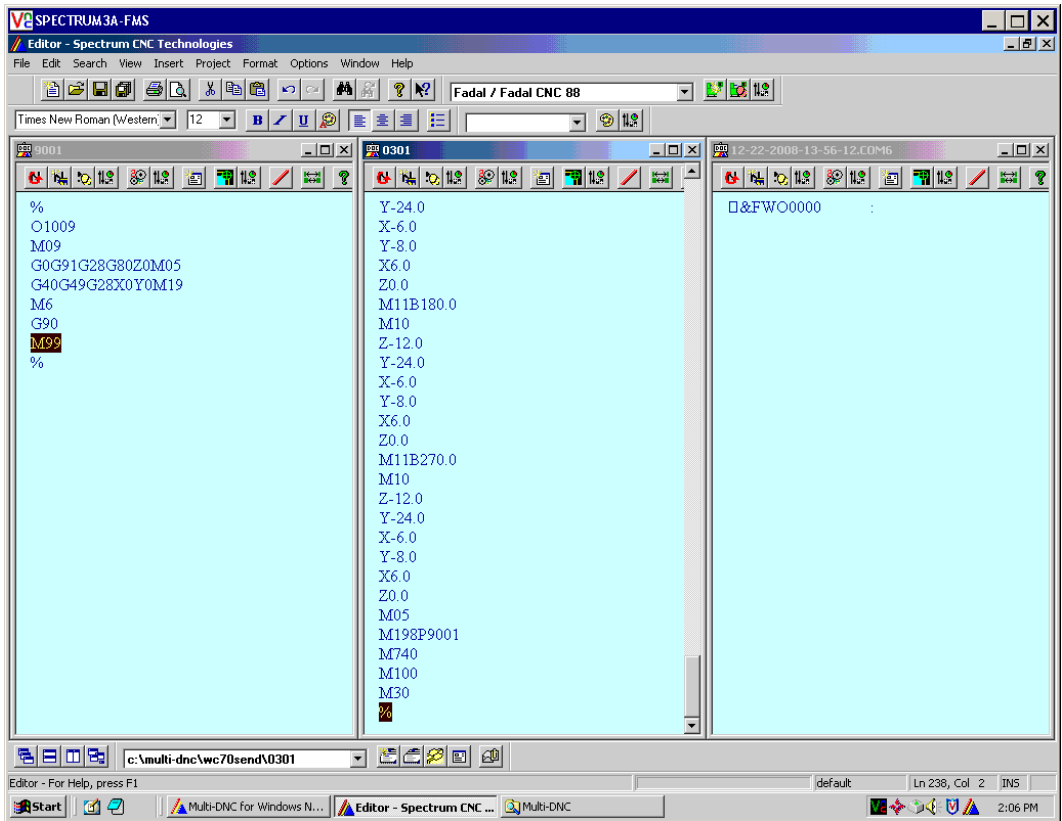
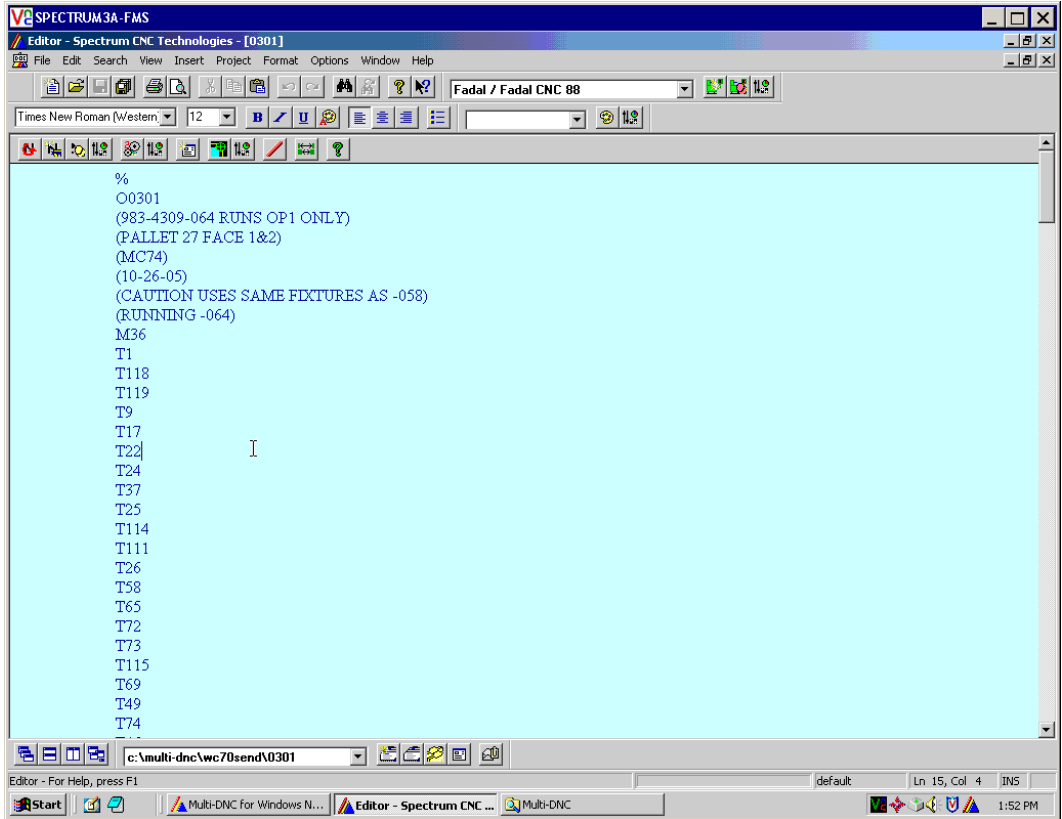
NB: \*\*\* Special parameters necessary to enable M198 feature  
This is similar for the Fanuc 16 as well

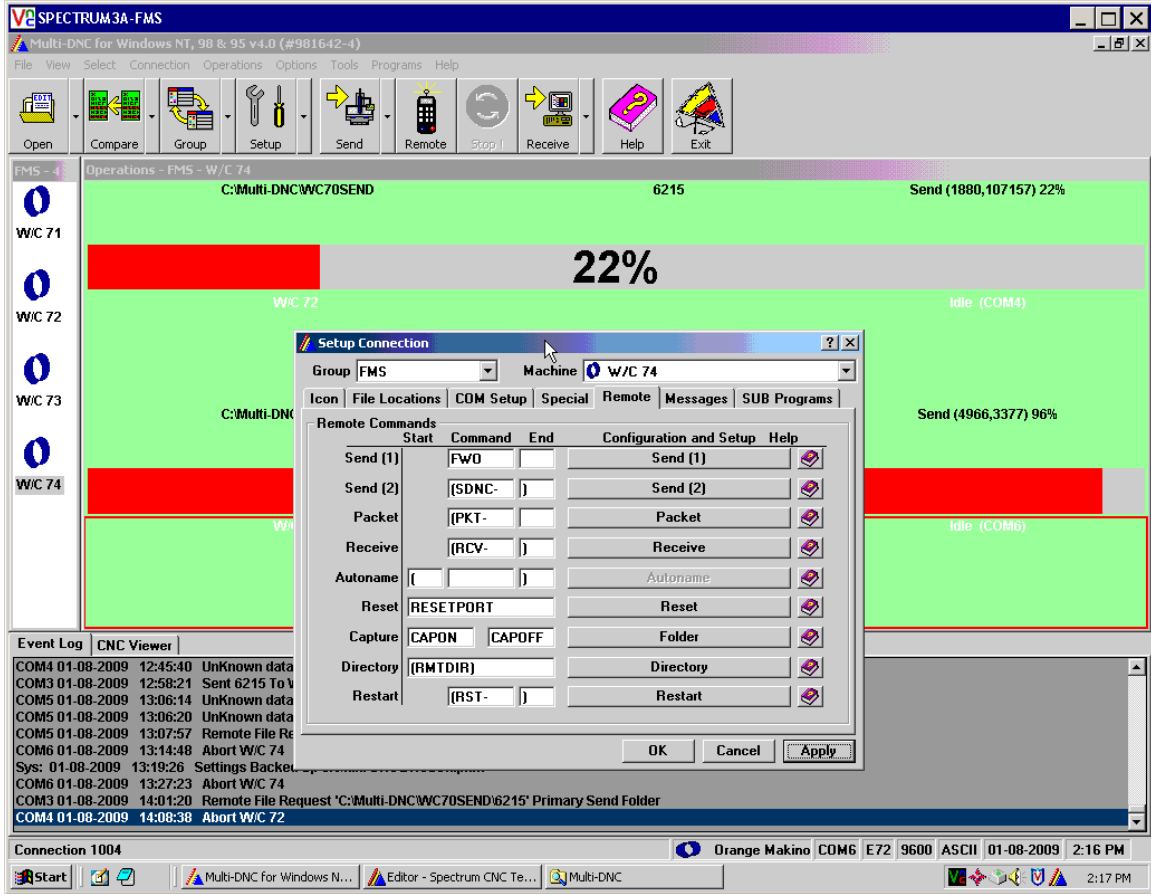
TG 09/01/08



Note that Send(1) has a blank space in the 2<sup>nd</sup> box to enable parsing of the M198 call.







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