

Instruction:	Rev Date:
Issued Date: 5/11/01	Rev Num: Draft #1
Issuer: Customer Service	
Approved By:	

Zeroing Home Position on a 180i, 210i Tool Changer

1. Install a tool holder in the spindle manually using the “Open Drawbar Button”
2. If the carousel will rotate with the “Rotate Magazine Pushbutton”, put pocket #1 in front of the spindle, if it will not, push in an emergency stop button, and turn the carousel by hand, and release the emergency button once it is close.
3. Pull E-stop back Out.
4. To Lower the Spindle Manually
 - a) Remove the red cover from the tool changer, locate the valve with the single 3/8th inch clear line, grab a small blade screwdriver and lower the spindle using this valve by turning the manual override slot below the electrical coil hood connection (DIN plug), the cable going into the connector should be labeled O1583, turn this to the 1 to lower the spindle into the tool change position, and leave it there until told otherwise.



Manual Override shown in the *On* position or ‘1’ position.

- b) Find the valve with the Yellow and Black hoses, the cable going into the DIN connector has a label, find the wire label O1328, turn the manual 1/0 slot to the 1 position to extend the carousel into the spindle, this valve can be turned back to the 0 position. This will make the gripper go around the tool, press in an emergency stop to relax the motor, this way it is truly in the right position, leave it on for the remainder of this procedure.



Manual Override shown in the *Off* position or ‘0’ position.

Note: For all valves to work properly they must be in the 0 position once finished.



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4. Press SYSTEM – Hard key, the keys to the right of the display.
5. Press Right ARROW – Soft key, + key, 3 times (soft keys are under the screen).
6. Press PMM – Soft key (see figure A).
7. If you have more than one spindle you will need to select the correct group # by using the [Next↑] and [Back↓] soft keys, if you have only one spindle, this step will be disregarded.
8. Press SYSTEM – Soft key (see figure B & C).
9. Press PARAM - soft key (see figure D).
10. Press ARROW Down-Cursor hard key down to Parameter # 11 (see figure E).
11. If this parameter reads- 10000000, you will need to change it to 10000001 to mark the home position. Whenever you change this parameter, shut down the control, and power right back on again.
12. If you have not lost home and need to reset the tool changer to the correct position, you will need to toggle the parameter from 10000001 to 10000000 and back to 10000001. Remember to power off after each time you change this parameter.
13. Before any tool changes can be made, the carousel has to be retracted, do this by turning the manual 1\0 slot on the opposite valve of O1328, this valve is labeled O1329.
14. Next, turn the manual 1\0 slot on the O1583 valve from the 1 position back to a 0, this should raise the spindle back to the upright, home position, and make sure all over ride slots are back to the 0 position.
15. Do some tool changes in MDI and make sure the tool holder is going up into the spindle straight and is being pulled up tight into the spindle
16. Program example: T2001 M06; G4X7.0; T2006 M06; G4X7.0; M99; this will do a tool change, dwell, change the other tool, and repeat over and over until you stop it.
17. If the alarm is still present (Tool Change Not Ready), pull out the E-Stop and turn the carousel one full revolution with the “Rotate Magazine Pushbutton”; if it will not rotate by the pushbutton give the machine an E-Stop and rotate the carousel by hand one full revolution. This procedure assumes that you have a good battery installed and only have a small “u” on the amplifier, if you have anything other than that on the amplifier, you will have to correct those alarms before doing this procedure, refer to the alarm codes on the last page.



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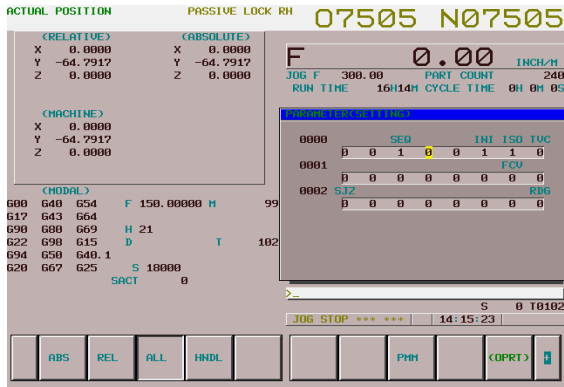


Figure A

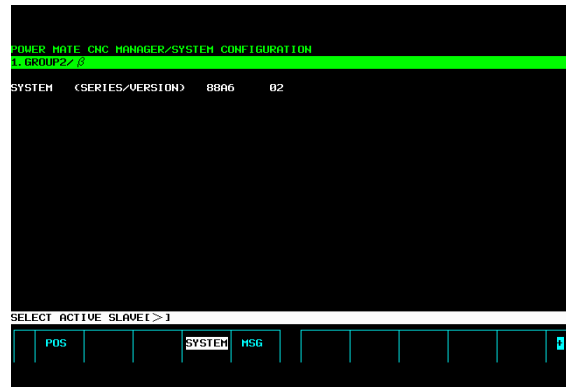


Figure B

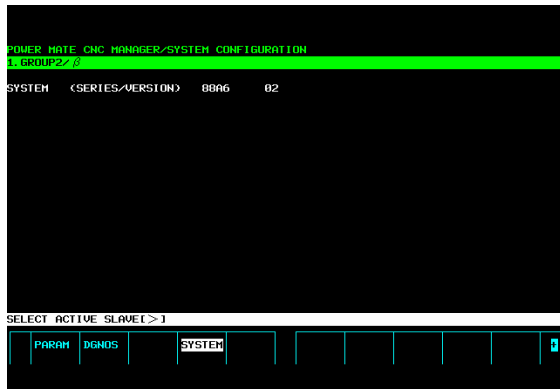


Figure C

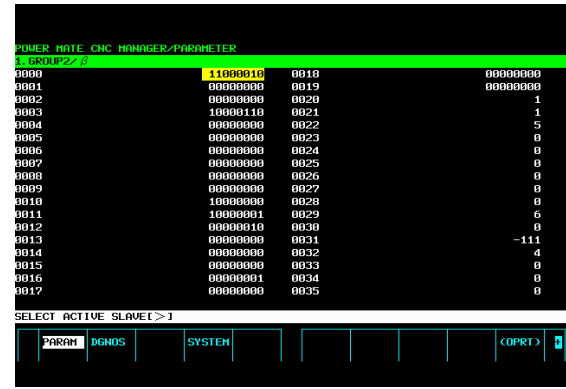


Figure D

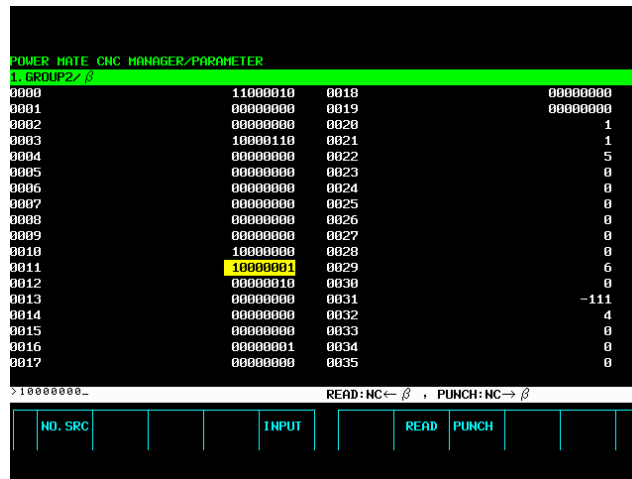


Figure E



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If you receive “tool changer # 2 Not ready” alarm on beta driven tool changer amplifier and observe (1, 2, 11, u, U) on the seven segment display, you will need to replace the battery, rotate the carousel 1 rotation, and re-home the tool changer. The loss of battery will cause the Beta amplifier to lose its home which needs to be re-loaded.

These are the following descriptions of the above alarms:

- Large U (A parameter has been changed, need to cycle power)
- Small u (Tool changer needs to be homed)
- # 11 (Need to rotate the carousel 1 full revolution with the “Rotate Magazine” Pushbutton)
- # 2 (No Battery – This needs to be fixed first before continuing)
- # 1 (Battery is low)

Tool number 2 generally means the machine has one spindle on it, if you have multiple spindles, it may say number 1, 3, etc.