

MITIKA OSAI CNC



SPECIAL WOOD WORKING MACHINE

GREDA snc di Daschini N. & C.

Via S. Agata, 5 I -22066 MARIANO C.SE -CO-

Tel 031- 750966 Fax 031 - 750967

<http://www.greda.it> e-mail: info@greda.it



MITIKA 1188/11

CNC Osai

The photos shown in this manual are purely indicative and are used only in order to better explain the functions of the numerical control.



MACHINE MOD: MITIKA 1188/11

V.3.0

DATE:
26/09/2011

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TURNING ON THE MACHINE

AIR CONNECTION

Graft the pipe of the compressed air to the group FRL.

Verify that the pressure of the air is at least 6 bar.



ELECTRICAL CONNECTION

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Verify the electric connection is executed properly and give current to the plant.

Rotate the black knob to the ON position .

Verify the warning light of tension presence on the control panel.

Wait the starting of the system and the loading of the applications.

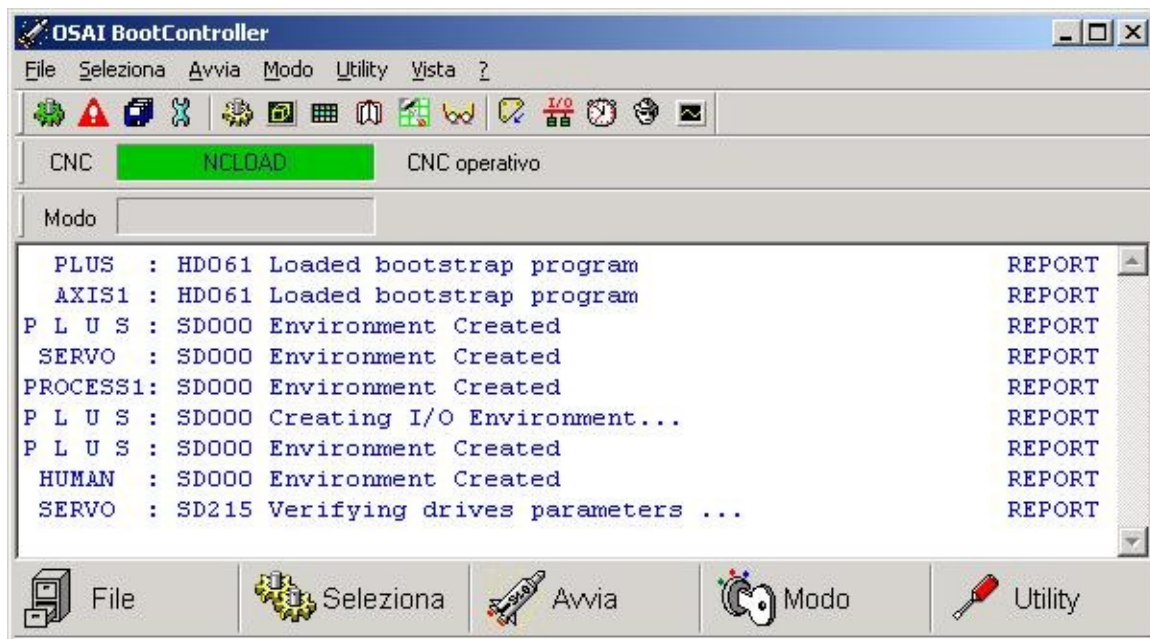


BOOT CONTROLLER START UP

When the CN starting is finished, the PC will launch automatically two applications:

- The Boot Controller, that determines the communication with the CN.
- The Greda Osai User Interface, that allows you the complete management of the machine.

The window of the Boot Controller is shown in the following picture:



The blue color messages point out the completion of the initialization phases of the CN.

If everything regularly proceeds to the end, the writing NCLOAD will be visualized on a green background. This means that the CN is connected and it is ready to work.

It is possible to minimize the Boot Controller window for better visualizing the CNC user interface.

ATTENTION: if missing of connection happens, the writing NCLOAD and some messages will be on red background. Check the reason for the error.

CNC USER INTERFACE

The main page of the user interface shows the most meaningful working data and allows direct access to all the functionalities of the machine.

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OSAL ProcessController - [greda]

File Display Select Set Up Origin/Tool Part Program Utility ?

FR0 + - +/-

Axes	Working Quotas	Programmed Quotas
X	0.00000	0.00000
Y	0.00000	0.00000
Z	0.00000	0.00000
B	0.00009	0.00000
A	0.00000	0.00000

Automatic | **Manual**

Speed% | Feed% + (F6) | Rapid% + (F8) | Feed% + (F12)

100.0 % | 100.0 % | 100.0 % | 30.0 %

Speed% | Feed% - (F5) | Rapid% - (F7) | Feed% - (F11)

0.000 | 0.000 | 0.000 | Dir (F9)

Mode **IDLE** | **MANJOG** | Rap O | Auto J | F Byp

Active Prog MASTER | Tool | Orig 0

```

;----- HOPPERFEEDER -----
E498=0 ; 0 = MANUAL; 1 = AUTOMATIC; 2 = SEMIAUTOMATIC
;
;----- LATHE ORIGIN -----
E101 = 20 ;OFFSET X LATHE SYSTEM
;
    
```

017:Low pressure compressed air

GEDA | CAD | Loader | Editor | Deactive | Active | Teach | Diagnostic

start | OSAL BootController | OSAL ProcessControll... | 8:14 AM



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MODE BUTTONS



AUTO

Pressing this icon the machine switch to automatic modality for the execution of the active program.



MDI

Pressing this icon the machine is in semiautomatic modality. It means it is possible to write a command and to perform it without having to compile a program.

ATTENTION: this function requires the knowledge of the codes in ISO language. To reserve its use to experienced users.



MANUAL

With this modality it is possible to move manually the axis.



ZERO PART

With this icon the machine remains in waiting for doing the set-point of only axis selected on the screen by arrow keys. Press START button to start.



SET POINT

Pressing this icon the machine automatically executes the SETPOINT for all the axis (ZERO MACHINE point).

AUXILIARY BUTTONS



Teach

This command abilitates the potentiometer knob on the remote control.



Diagnostic

With this icon you'll be entered to a sequence of pages in which there are recapitulated all the G and M functions useful to the management of the working groups. Look at the dedicated chapter.

Hopper-Feeder Status



This is a box in which is reported the hopper-feeder status, read from the variable E498 (set up in Master program). The value is not editable from here.

E498	Mode	Meanings
0	Manual	Hopper-feeder disabled. The piece is locked/unlocked on the lathe system pressing the pedal directly by the user. A set point cycle (M26) is run only if the variable E497= 0 (set up in part-program at the end of a lathing operation).
1	Semiauto	Hopper-feeder disabled except reference arms. The piece is locked/unlocked on the lathe system and the reference arms are moved pressing the pedal. A set point cycle (M26) is always run as soon you press the start button.
2	Automatic	Hopper-feeder enabled.

PROGRAM MANAGEMENT BUTTONS



Program Deactivation

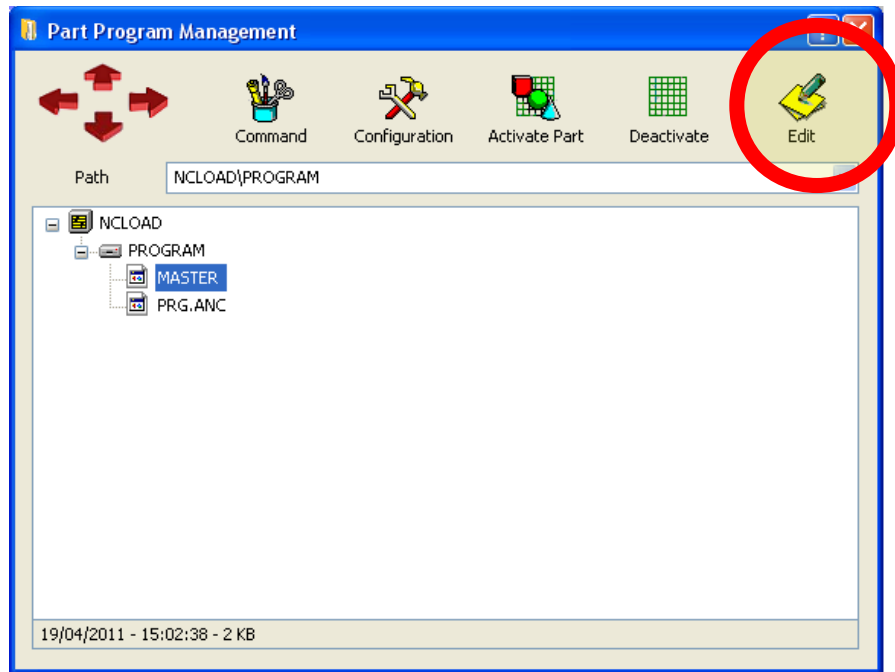
Pressing this button is deactivated the current program. It is necessary to deactivate a program whenever you intends to modify it.



Editor

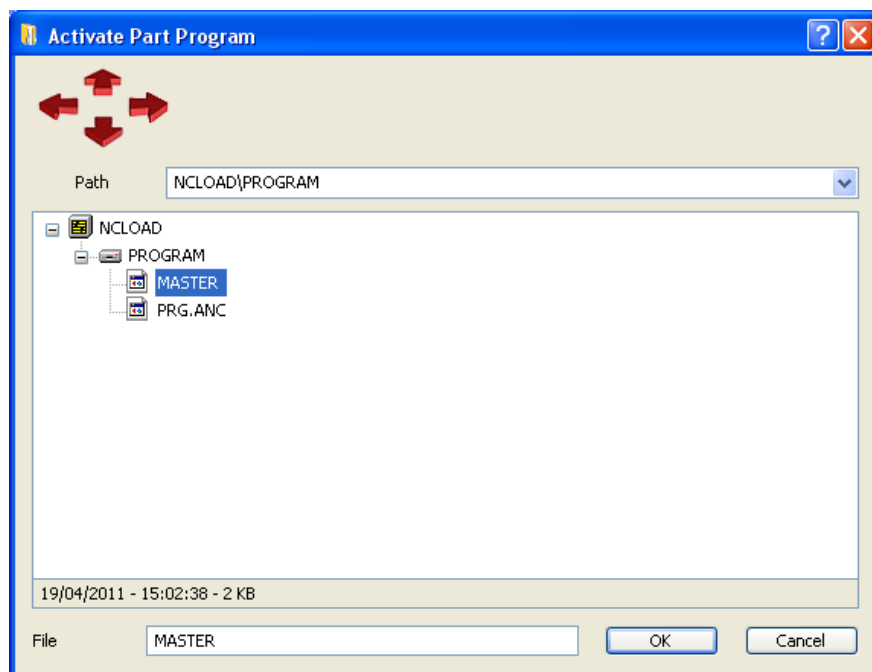
Use this icon to access a menu that allows you to activate/deactivate and edit programs.

ATTENTION: only for experienced users.



Program Activation

Pressing this button is activated the last selected program. It is necessary to activate the program whenever you want its execution.



AXIS CHART

	Work	Programmed	Origin
<u>X</u>	0.00000	0.00000	0
Y	0.00000	0.00000	0
Z	0.00000	0.00000	0
A	0.00000	0.00000	0

The axis chart shows the current and the programmed coordinates referred to the active origin. The box with the axis name underlined points out which is the selected one to be moved by Manual or Zero Part. modes. Click on the name of the desired axis or use the arrow keys to change the selection.

SPEED AND JOG CHART

Jog Dir. F9	+/-	+	ACTUAL		
Feed	F5 -	0.0 %	+ F6	0.000	
Feed M	F11 -	0.0 %	+ F12	0.000	
SPEED	-	100.0 %	+	0.000	
RAPID	F7 -	0.0 %	+ F8	0.000	
Jog Inc.	-	+	0.000	F Prog.	0.000

It recapitulates and allows the modulation of the followings data:

- **Feed:** programmed working speed of the axis (mm/min) in mode Auto or Mdi.
- **Feed M:** speed of the axis in Jog mode.
- **Speed:** rotations per minute (rpm) of the active spindle.
- **Rapid:** rapid speed of the axis for mode Auto or Mdi (mm/min).

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To modify the percentage values of the speeds, reported to the maximum values, click on the special icons + or -. You can also press the keys function F associated

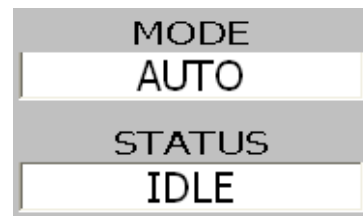
In order to move the axis in Jog mode, there are the following functions:

Jog Dir.: Click on this button to reverse the direction of the movement.

Jog Inc.: Not available on Mitika machine.

MODE and STATUS CHART

It shows the current STATUS and operative MODE.



STATUS CHART

Idle	The process is stopped and waiting for a command
In Cycle	The process is executing a part program or a Mdi command
Run	The process is executing a Jog movement
Hold	The execution of a program has been interrupted by Hold button
HRun	The process left the Hold status because a second pushing of Hold button. Now it is waiting for the Start button.
Error	An error is occurring

MODE: It shows the active mode. See the paragraph “MODE buttons”.

REPORT ACTIVE PROGRAM

When a program is active it means that when the pressure of the key START (see control panel) occurred, the program will goes in execution if the CN is in Auto mode.

The **P.P.** box shows the active program name.



The **SUBP** box(SubProgram) shows the name of a program called by the active program. When in execution it is possible to see the program scrolling in the main window interface.

MESSAGES BOX

They can appear different messages. The messages of simple communications (for instance: "set zero point") or request (es: "lock the piece") they are invocated by Part-Program (PP Msg) and they have a blue color background.



The **CN error** messages(es: "syntax error") are on red color background.



The **PLC error** messages (es: "low air pressure") have got a yellow color background.



On all cases, *it is necessary to press the RESET button on the control dashboard and find the solution of the problem.*

DIAGNOSTIC PAGES

The meaning of these pages is to visualize a list of all the M and G code that can be useful to manage each working group.

The code can be run by execution of a part-program in Auto mode or directly in MDI mode.

You can scroll all the pages by pressing the black arrow button on the right.

Here an example of code sequence to put in rotation the Group 1:

M102 ; HEAD FWD

M110 ; MOTOR ON

Diagnostic Page 1: M code Working Groups

The screenshot shows the OSAI ProcessController software interface. The title bar reads "OSAI ProcessController - [diagnostica 1]". The main window displays "PAGE 1" and a grid of M code sequences for different working groups. The groups are labeled "GROUP 1", "GROUP 3", "GROUP 4", "GROUP 5", and "GROUP 6". The M code sequences include:

- Spindle rot. M13Q
- Stop spindle M15
- Head BWD M101, M301, M501, M18
- Head FWD M102, M302, M502, M19
- Motor ON M110, M310, M510
- Motor OFF M111, M311, M511
- Magazine FWD M456
- Magazine BWD M457
- Piston UP M458
- Piston DOWN M459
- Tool unlock M454
- Tool lock M455
- Change T 1-8 M6T
- T0 discharge M6T0
- Reset T 1

A red error message "041:Axes not referred" is displayed at the bottom of the interface. A green circle highlights a play button icon on the right side of the interface.

Diagnostic Page 1: Set T number Group 4

The field “Reset T” is the only one editable by user. It is the number of the tool mounted on the group 4 (if the optional tool-changer is available).

Write the number (1 to 8) and press ENTER on the keyboard.

It is necessary to update this field every time you mount/dismount tools manually. The PLC must know what is the actual tool present in the head in order to operate next tool-changing.

Diagnostic Page 2: M code Lathe / Hopper-Feeder

OSAI ProcessController - [diagnostica 2]

File Display Select Set Up Origin/Tool Part Program Utility ?

FRO + - +/-

PAGE 2

LATHE GROUP LOADER

M CODE

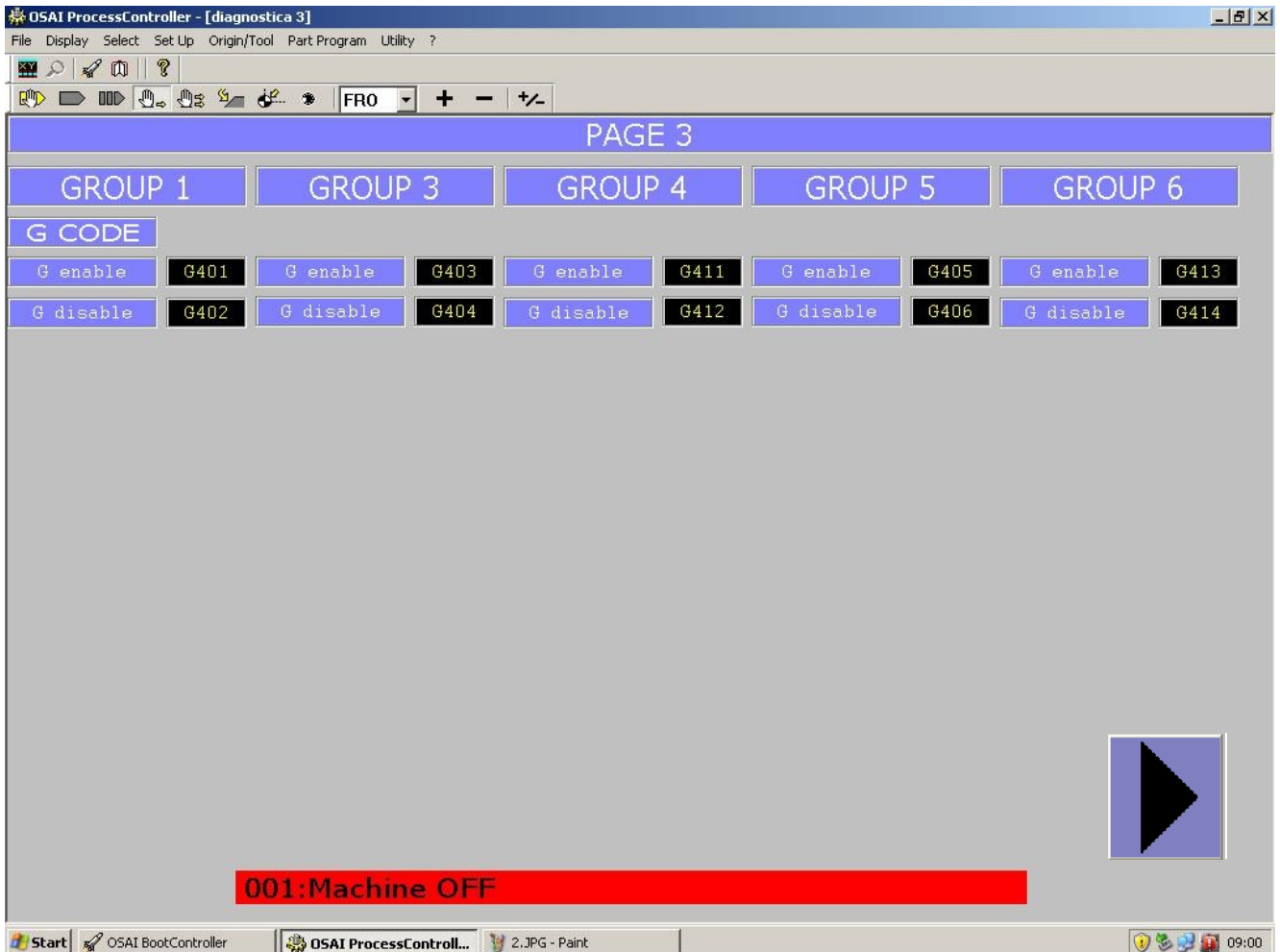
Spindle Rot.	M23P..	Tip FWD	M601
Stop spindle	M25	Tip BWD	M602
Lathe zero	M26	Unloader UP	M603
Spiral ON	M28	Unloader DW	M604
Spiral OFF	M29	Loader FWD	M605
Clutch OFF	M21	Loader BWD	M606
Clutch ON	M22		

001:Machine OFF

Start OSAI BootController OSAI ProcessControll... 1.JPG - Paint 09:00

Diagnostic Page 3: G code Working Groups

These codes activate a group in order to go in machining:

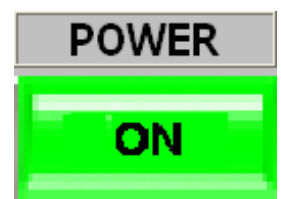


DASHBOARD



POWER-ON KEY

The key is to give power to the axes. In this status the white light on or the warning light visible on the interface must be on. Also the green status icon on the interface will be light on.



EMERGENCY BUTTON

The red button has an emergency function. When pressed, it immediately removes power from the machine, stopping the axes and spindle motors.

START BUTTON

The START button has multiple uses. It can be used for::

- start a program
- execute a command in MDI
- move an axis in manual mode
- launch the partial set point
- restart from the status of HRun (Hold) of the machine

RESET BUTTON

The RESET button is used to end the execution of a program or a command MDI, as well as to clear/cancel an error message

ELECTRIC POWER PRESENCE

The red light on the right of the panel indicates the presence of voltage. It turns on immediately after turning on the general switch on the side of electrical box.

HOLD BUTTON

The execution of a program the machine can be suspended pressing the HOLD button. This stops also the axes and spindle motors.

The following message will be displayed on the screen



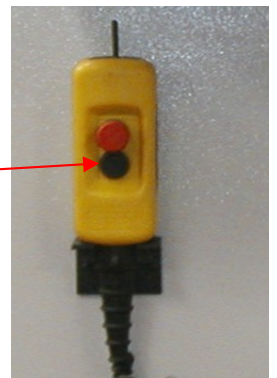
HOLD

To restart from HOLD mode, press again the black button and the "START" button aside

"DEAD MAN" BUTTON

If you are working with the mobile control panel, releasing the "dead man" button, the Hold state is entered. Pressing it again you can restart.

N.B.: You should always start with the feed rate set on a low value.



“OVER TRAVEL” RECOVERY BUTTON

- Identify the axis in over travel
- While pressing the white button aside the key, give power to the axis by key.
- Move in JOG mode the axis in the correct direction.

When the axis is out of the emergency, you can release the “recovery” button. If the light turns off when releasing the button, it means that the axis is still in emergency or that there is another axis in emergency. This procedure must be repeated until the light stays on after releasing the button.


POWER ON AND EMERGENCY CHAIN

Turning the key is given power to the axes. If the control light is off, there is some problem. Then, you must verify the emergencies on the machine in order to identify the problem.

- Check the buttons on the panel, console and possibly on the machine. When you find the pressed button, you must release it and try again.
- Check that axes are not in over travel. To verify it, press the white button and turn the key. The white light on warns that there is an axis in over travel

SET POINT EXECUTION

When you turn on the machine, the main page will automatically open. The CN, however, does not know the position of the axes. First thing to do is the set point.

For the general Set-point of all the axes you must insert the power (see the related paragraph) and press  the icon.

The machine will start the set point of the axes following this sequence: Z,Y,X,A,C


For the set-point of only one axis, just click on the icon



select the axis by clicking on the name of the axis and press START

MOVEMENT IN MANUAL (JOG) MODE

To move the machine in JOG mode, follow this procedure:

- press the related icon 
- select the axis to move
- press the icon Dir (F9) to select the direction of the movement (to facilitate the selection, the machine indicates the positive and negative direction of each axis)
- choose the speed rate (in percentage) to be used to move the axis using the two icons Feeds + (F12) and Feed - (F11).
- At this point the machine performs the movement chosen by pressing START, when you release the button it stops.

To avoid moving the axis beyond the mechanical limits, the CN checks some software limits that prevent from moving the axes in over travel. When happens, the machine stops and the screen will show a warning yellow message that software limit has been reached.

WARNING: The software limits work only if you have previously run the set-point cycle of the axes. So if you move manually the axes before the SET POINT executed, you must pay particular attention.

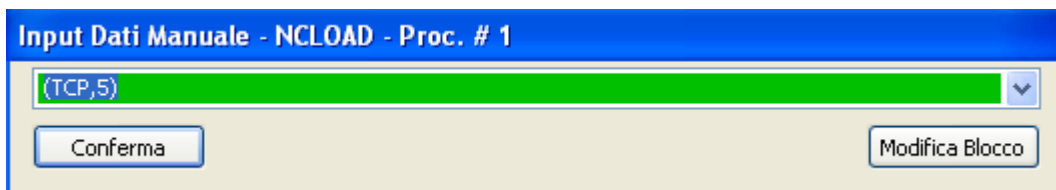
TOOL EXTRACTION (4/5 AXES)

NOTE: The procedure is not to be taken on the 3-axis machines because the tool direction will always be coincident with the axis Z

If the tool stops during an angle/inclined machining inside the material/piece, it may be a problem to extract it/pull it out in manual mode with only the axes X Y Z available.

In this case it is useful to activate a virtual axis "P" in the same direction of the tool and move along it.

- Press Reset
- In MDI mode, write L386= tool holder number to be checked (es: L386=2)
- Press ENTER (or Confirm) and then START to validate
- Always in MDI mode, write TCP,5)



Input Dati Manuale - NCLOAD - Proc. # 1

(TCP,5)

Conferma Modifica Blocco

- Press ENTER (or Confirm) and then START to validate
- The virtual axis "P" appears on the screen. Select it.

	Work	Programmed	Origin
X	-1231.33333	0.00000	0
Y	15.24143	0.00000	0
Z	161.87776	0.00000	0
A	-116.77073	0.00000	0
P	0.00000	0.00000	0

- Change/switch to manual mode.
- Choose the direction of the movement "+" to exit/come out from the workpiece.
- Execute the movement by pressing START

PROGRAM TEST WITH MOBILE CONSOLE

In order to test a program in a more comfortable way, the machine is equipped with a mobile remote control. The mobile console can be easily moved closer to the working area.



- Edit the Masters program (see "Programming GREDA CNC machining centres with OSAI cn)
- Activate the Master program
- Click the icon Auto (F1) to set the machine in automatic mode
- Click the icon TEACH to select the potentiometer
- If you want to try with the motor off press the icon MOTOR OFF
- Hold the potentiometer. It is advisable to set the speed to zero before pressing the START button.
- Press START to start up the Master program
- Lock the workpiece. You can test a program even without the piece but you always have to press the pedal to lock.
- Select/Book the area of interest
- The machine will perform the work program with 50% of rapid movement speed.

PROGRAM EXECUTION

When the program is working properly in test modality, repeat the test procedure without turning on the mobile console potentiometer.

The machine will run the work program with the maximum rapid and work speed programmed. The speeds can still be adjusted through the buttons on the interface.

MASTER PROGRAM

This is the program that should be activated and executed.

Many fundamental parameters are set here and then the piece program is called.

```
;----- HOPPERFEEDER -----  
E498 = 0 ; 0 = MANUAL; 1 = AUTOMATIC; 2 = SEMIAUTOMATIC  
;----- LATHE ORIGIN -----  
E101 = 0 ;offset X lathe system  
;----- TABLE ORIGIN -----  
E201 = 0 ;offset X table  
E202 = 0 ;offset Y table  
E203 = 0 ;offset Z table  
;----- EXTRA SAFETY DISTANCE -----  
E496 = 0 ;GR1 3 5 6  
E495 = 0 ;GR4  
;----- "Y" OVERMATERIAL GROUPS 1 3 5 6 -----  
;correction along Y direction  
E11=0 ;GR1  
E31=0 ;GR3  
E51=0 ;GR5  
E61=0 ;GR6  
;----- TOOL LENGHTS GROUP 4 -----  
;these values set the L385 for TCP management  
E41=136.3 ;T1  
E42=103.7 ;T2  
E43=81.4 ;T3  
E44=114.9 ;T4  
E45=75.9 ;T5  
E46=120.7 ;T6  
E47=100.3 ;T7  
E48=105 ;T8  
;----- PIECE PROGRAM EXECUTION -----  
(CLS,PRG.ANC)  
;  
;----- PARKING POSITION -----  
G0G79X-1500  
;  
;----- END -----  
M30
```

PART-PROG EXAMPLE GROUP 1

Group 1 is a blade d300 that works with on the side of the geometry. It can be used only for lathing, that means, without control over the position of the divisor

Group 1 cannot work on the table, but only with the lathe

It can move only along the linear axes x and y (only group 4 electrospindle can move in z)

The rotation axis of the blade is in the same z-axis coordinate of the lathe.

```
M21      ; DIVISOR CLUTCH DISCONNECTION TO ALLOW TURNING
(DLY,1)  :always after M21
M23 P500 ;LATHE ROTATION .
G401     ;Activate origin UIO for Gr1, G17 and group outside, contattore on
M13 Q4500 ; GROUP 1 o 3 ROTATION. Group 5 wants only M13 without Q
G00 X250 ;coordinate at blade centre
Y200     ; coordinate at blade centre
G01 Y180 F500 ;F work input.
G01 X0 F300 ;F work
G00 Y200
G402     ;reset gr1 origin, head backwards and to Y0 machine
M15      ; rotation stop of Gr 1 o 3 o 5
;
M25      ;lathe stop if next operation does not require it
(DLY,0.9) ;pause always to put after M25
M26      ;CLUTCH ON AND RUN LATHE SET POINT
```

PART-PROG EXAMPLE GROUP 3

Group 3 works only with controller divisor and cannot work on the table.

It is a cutter D100 cw from top view with rpm max 9000. It can move only along he linear axes x e y

```
G403     ;Activate UIO per Gr3, G17 e head forward
M13Q8000
G00 X250 A0 ;Rotate the divisor
Y120
G01 Y80 F2000
G01 X0
G00 Y120
G404     ;reset gr3 origin, stop and backward group, goes to Y0 machine
```



PART-PROG EXAMPLE GROUP 5

Group 5 works only with divisor and it cannot work on the table..
Group 5 is a SANDING BELT D100 CW plan view. Fixed Rpm .
It can move only along he linear axes X e Y

```
G405      ;Activate UIO for Gr5, G17, head forward, rotation.
G00 X250 A0
Y120
G01 Y80.5 F2000
G01 X0
G00 Y120
G406      ;reset gr5 origin, stop and backward group, goes to Y0 machine
```

PART-PROG EXAMPLE GROUP 6

It can be used only for lathing, that means, without control over the position of the divisor
Group 6 cannot work on the table, but only with lathe.
The tool is a gouge D2.4, without own rotation. It can move only along linear axes X and Y.

```
M21      ;Clutch off.
(DLY,1)   ;pause always after M21
M23 P500  ;Lathe rotation.
G413     ;Origin activation, group forward
G00 X250
Y100
G01 Y30 F500
G01 X0 F100
G00 Y100
G414     Reset origin Gr6. Stop, head back, and goes to Y0 machine

M25      ;STOP Lathe
(DLY,0.9) ;always after M25
M26     ;clutch on, Lathe SET POINT execution.
```

PART-PROG EXAMPLE GROUP 4

Group 4 cannot work in lathing, but with divisor or table device (not in the same program).
It is available the Z axis and the B tilting +-90.
Managed with TCP. Tool lenght set in Master program.

; EXAMPLE MACHINING 3 + 2 AXIS

M6 T3 ; TOOL CHANGING
L385=E43 ; ; L TOOL
G411 ; UIO, MOTORE ON
(TCP,1)
M3S16000 ;SPINDLE ROTATION
G00 X96.154 A0 Y0 B0
Z120
G01 Z62.326 F2000
G01 Z37
G03 X126.154 Y-30 R30
G03 X156.154 Y0 R30
G03 X126.154 Y30 R30
G03 X96.154 Y0 R30
G00 Z62.326
G00 Z120
;
G00 X96.154 A90 Y0 B0 ;PLANE CHANGING WITH DIVISOR ROTATION
Z112.326
G01 Z62.326 F2000
G01 Z37
G03 X126.154 Y-30 R30
G03 X156.154 Y0 R30
G03 X126.154 Y30 R30
G03 X96.154 Y0 R30
G00 Z62.326
G00 Z112.326
(TCP)
G412 ; RESET UIO, RISE TO Z FOR TOOL CHANGING, SPINDLE OFF

; EXAMPLE MACHINING 4 AXIS (B AXIS ROTATION, A FIXED)

M6 T8
L385=E48
G411
(TCP,1)
M3S16000
G00 X96.154 A0 Y0 B-1.0578
Z112.326
G01 Z62.326 F2000
G01 Z34.234
G01 X96.23 Y-2.14 B-1.055 Z34.235
G01 X96.459 Y-4.269 B-1.0466 Z34.239
G01 X96.839 Y-6.377 B-1.0327 Z34.246
G01 X97.369 Y-8.452 B-1.0133 Z34.256
G01 X98.045 Y-10.484 B-0.9885 Z34.267
G01 X98.865 Y-12.462 B-0.9584 Z34.281
....
.....
G01 X97.369 Y8.452 B-1.0133 Z34.256
G01 X96.839 Y6.377 B-1.0327 Z34.246
G01 X96.459 Y4.269 B-1.0466 Z34.239
G01 X96.23 Y2.14 B-1.055 Z34.235
G01 X96.154 Y0 B-1.0578 Z34.234
G00 Z62.326
G00 Z112.326
(TCP)
G412

; EXAMPLE MACHINING 4 AXIS (A AXIS ROTATION, B FIXED)

M6T1
L385=E41
G411
(TCP,1)
M3S16000
F8000
G0Y14.306X368.0Z159.359A-0.002
Y14.306X288.0Z159.359
Y3.663X277.5Z69.419
Y1.878X277.5Z68.785
Y0.0X277.5Z68.49
Y0.0X277.5Z68.488A-2.737F8000
Y0.0X277.5Z68.499A-5.038
Y0.0X277.5Z68.528A-7.338
Y0.0X277.5Z68.511A-9.286
.....
Y0.0X2.5Z83.333A-20518.152
Y0.0X2.5Z83.344A-20520.086
Y-1.879X2.5Z83.633F8000
Y-3.667X2.5Z84.26
Y-5.284X2.5Z85.248
Y-6.658X2.5Z86.552
Y-7.729X2.5Z88.115
Y-8.449X2.5Z89.867
Y-8.786X2.5Z91.732
Y-8.808X2.5Z92.581
Y-8.808X2.5Z102.581
G0Y-8.808X2.5Z112.581
(TCP)
G412
M26 ;SET AT 0 IF OVER +/- 720°
;

; EXAMPLE MACHINING 5 AXIS (A + B AXIS ROTATION)

M6 T6
L385=E46
G411
(TCP,1)
M3S20000
G00 X282.962 Y0.0 A-1.4666 B21.7034
Z84.853
G01 Z37.192 F3000
G01 X283.029 A0.9938 B21.662 Z37.165
G01 X283.231 A3.3494 B21.538 Z37.088
G01 X283.566 A5.6025 B21.3316 Z36.961
G01 X284.035 A7.7555 B21.0432 Z36.786
G01 X284.639 A9.8114 B20.6731 Z36.565
G01 X285.377 A11.7733 B20.2219 Z36.301
G01 X286.249 A13.644 B19.6904 Z35.997
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G01 X516.283 A-9.2455 B-24.0435 Z38.8
G01 X517.038 A-9.4286 B-24.5179 Z39.141
G01 X516.598 A-13.3699 B-24.2409 Z38.964
G01 X516.157 A-17.2227 B-23.9646 Z38.8
G01 X515.717 A-20.956 B-23.6888 Z38.647
G00 Z84.853
(TCP)
G412

ALARMS

1-MACHINE OFF	a) check of the emergency buttons, axis sensors and turn the key (power on)
2-SWITCHING ON IN PROGRESS	b) if the machine does not work press the green button (power on) , turn the key without releasing the green button and press the button "SET POINT"
3-SWITCHIN OFF IN PROGRESS	c) if the machine does not start, search for "24 V" and the fuse ---
4-TIMEOUT AXES ENABLE	A problem is preventing the drive axex to be enabled, turn off and then on the machine ---
5-TIMEOUT SWITCH OFF	A.machine cycle pause, press HOLD and START B check the air pressure C check the vacuum D check the doors sensors ---
6-FEED HOLD ACTIVATED	---
7-ERROR IN THE TOOL TABLE DURING RQP	---
8 ERROR IN THE TOOL TABLE DURING RQT	---
9- ERROR IN THE TOOL TABLE DURING TOU	---
10-ERROR DURING MAS	---
11-ERROR TOOL OFFSET ACTIVATION	---
12-ERRORE PPAFTER M6 RESTART	---
13- LOW LEVEL GREASE LUBRICATION	Check lubrication system (grease pump)
14-ALLARM SPINDLE MOTORS TEMPERATURE	wait 4/5 minutes to restart the program
15-LOW AIR PRESSURE	Check air pressure level
16-ERROR DURIN HOMING CYCLE	Error in setting the axes to zero, try again
17-SET AXES TO ZERO POINT	Reset axes to zero point
18-THERMIC LEFT VACUUM PUMP	Thermic alarm of the pump: the relé has tripped: open the electric cabinet and press the black button
19-THERMIC RIGHT VACUUM PUMP	Thermic alarm of the pump: the relé has tripped: open the electric cabinet and press the black button
20- THERMIC PUMP COOLER SPINDLE	Thermic alarm of the pump: the relé has tripped: open the electric cabinet and press the black button
21-THERMIC DRILLING UNIT	The protection of the drilling unit motor has tripped. Make sure the motor is free to rotate without obstacles. Reset the thermal.
22-PRESS RESET PER RESET EMERG.	---

23-ALARM LEFT DOOR/MAT	Close the door and verify the sensors
24-ALARM RIGHT DOOR/MAT	Close the door and verify the sensors
25-LOW LEFT VACUUM LEVEL	The vacuum of the table is not adequate. Check the piece
26-LOW RIGHT VACUM LEVEL	The vacuum of the table is not adequate. Check the piece
27-ERROR IN TOOL TABLE	---
28-INSIDE CN ERROR	Switch off and on the machine
29- !! MOTOR OFF ACTIVATED !!	The working cycle is run with motor off
30- CLOSE THE POTENTIOMETER	---
31-TIME-OUT LEFT VACUUM	The vacuum of the table is not adequate. Check the piece
32-TIME-OUT RIGHT VACUUM	The vacuum of the table is not adequate. Check the piece
33- INVERTER OVERLOAD	
34-SPINDLE RISE DENIED	Check the micro switch on the cylinder in question
35-SPINDLE FALL DENIED	Check the micro switch on the cylinder in question
36-BLADE RISE DENIED	Check the micro switch on the cylinder in question
37-BLADE FALL DENIED	Check the micro switch on the cylinder in question
38-SPINDLE MICRO HEAD ANOMALY /FAULT	Check the micro switch on the cylinder in question
39-BLADE MICRO HEAD ANOMALY/FAULT	Check the micro switch on the cylinder in question
40-INVERTERS UNAVAILABLE FOR SPINDLE 1	
41-TIME-OUT CONTACTOR SPINDLE 1	
42- INVERTERS UNAVAILABLE FOR SPINDLE 2	
43- TIME-OUT CONTACTOR SPINDLE 2	
44- INVERTERS UNAVAILABLE FOR SPINDLE. 3	
45- TIME-OUT CONTACTOR SPINDLE 3	
46- INVERTERS UNAVAILABLE FOR SPINDLE 4	
47- TIME-OUT CONTACTOR SPINDLE 4	
48- FEEDHOLD AXES- RPM SPINDLE NOT REACHED	
49-ERROR IN AXES ZERO SETTING	
50-AXES ZERO/NULL SETTING IN PROGRESS	
51-TIME-OUT SPINDLE HEAD MOVEMENTS	

52-TIME-OUT BLADE HEAD MOVEMENTS

53-AXES MOVEMENT NOT ALLOWED

54-MICRO HOOD ANOMALY

55-HOOD MOVEMENTS TIME OUT

56-HOOD FALL NOT ALLOWED

Check the micro switch on the cylinder in question

57-MICRO TC CARRIAGE ANOMALY

Check the micro switch on the cylinder in question

58-TIME-OUT CARRIAGE MOVEMENTS

59-CU CARRIAGE FORWARD NOT ALLOWED

Check the micro switch on the cylinder in question

60- CU CARRIAGE BACKWARD NOT ALLOWED

Check the micro switch on the cylinder in question

61-TOOL LOCK DENIED

62-TOOL UNLOCK DENIED

63- TOOL LOCK SENSORS ANOMALY

64-TIME-OUT TOOL LOCK/UNLOCK

65-TC RACK HOOD MOVEMENTS NOT

ALLOWED

66- MICRO TC RACK HOOD ANOMALY

67-TIME-OUT MOV. TC RACK HOOD

MOVEMENTS

68-SPINDLE/DRILL UNIT CONFIGURATION

ERROR .

69-TOOL MEMORY INCONSISTENT

70-TOOL M1 UNLOCKED

400: CANOPEN NOT CONFIGURED

401: NODE/ KNOB XX ERROR

402: EMRGENCY CAN AXES

403: CAN AXES ENABLE IN PROGRESS

404: CAN AXES DESABLE IN PROGRESS

405: CAN AXES EMERGENCY IN PROGRESS

406: CAN AXES RESET IN PROGRESS

407: CYCLE STOP AXES CAN IN PROGRESS

408: STARTUP CANOPEN



409: CANBUS ERROR

481: INVERTER 1 KO

Open the electric cabinet and check the alarm on the inverter

482: INVERTER 2 KO

Open the electric cabinet and check the alarm on the inverter

497:DRIVExx NOT OK OR OFF

Open the electric cabinet and check the alarm on the drive

529:DRIVE xx WARNING

Open the electric cabinet and check the warning on the drive