Help Gpilote

Table Of Contents

Welcome to GPILOTE

Congratulation to choose Gpilote.

- The piloting module of CharlyGRAAL has a main function to retrieve the machining files that you have generated in the FAO module and send them to the machine through the numeric command .

- You can also, with the piloting module CharlyGRAAL, perform ISO files comming from others FAO software. You just need to launch Gpilote, load the machine files and follow the same procedure as a native CharlyGRAAL's file.

GPILOTE is a user-friendly application whose the easiness of use and come to grips with makes it ones of the best piloting software actually on the market .
In order that you make the best profit of GPILOT, we divoted a big part of our time to the redaction of the informations in this help file.

You can obtain help in most of the GPILOT commands.

If you wan a complete list of GPILOT commands with a brief description, please visit the user's interface.

Travel through hypertext links send to complementary informations.

GPILOTE installation

CONFIGURATION REQUIERED

Minimum configuration
Computer type PC Pentium 266, RAM 64Mo, Windows95B

Recommented configuration
Computer type PC Pentium III, RAM 128Mo, Windows 98 or more,
for Windows XP 256 Mo of RAM.

It's recommended to use a display of 800 x 600 to make smoother the charlyGRAAL display.

INSTALLATION

• Insert the installation's CD-ROM into your CD-ROM driver.

• The installation starts automatically.

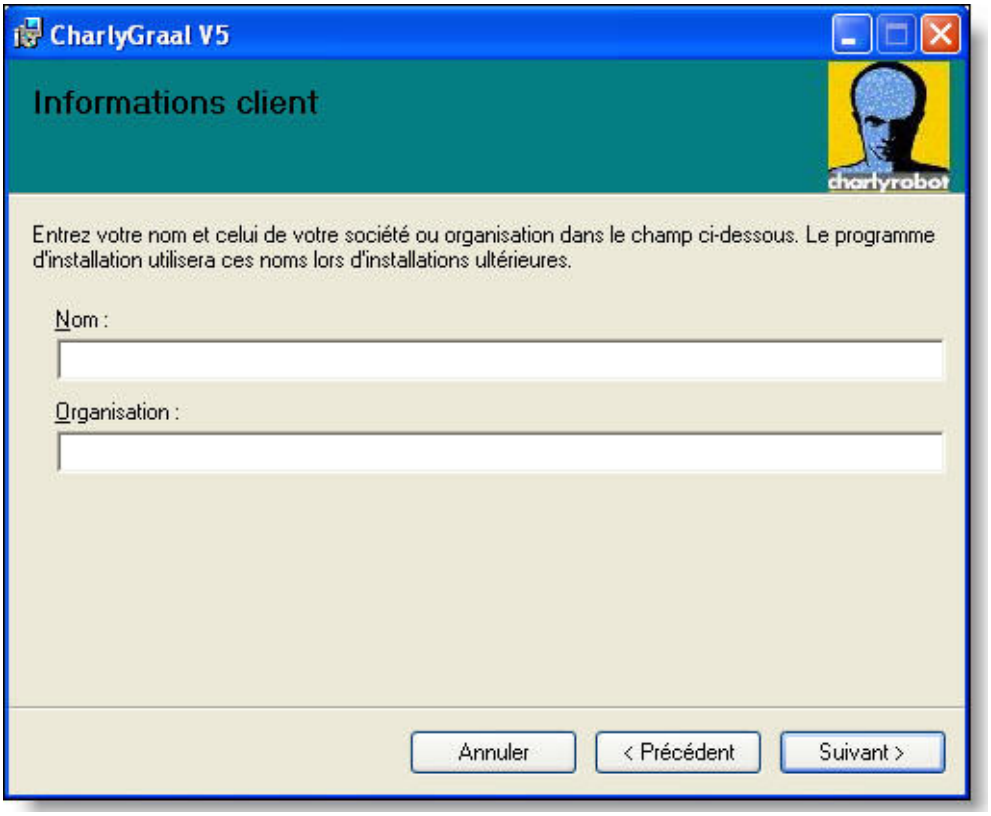
• **If the installations does not start automatically**.

That is mean your CD-ROM driver does not support the fonction "Autorun" (automatic start), proceed as followed : click on the Windows's "START" menu then on the under-menu "Run" on the command prompt, enter "D:\install" (we suppose the associated letter to your CD-ROM driver is the letter D) then click on "OK".

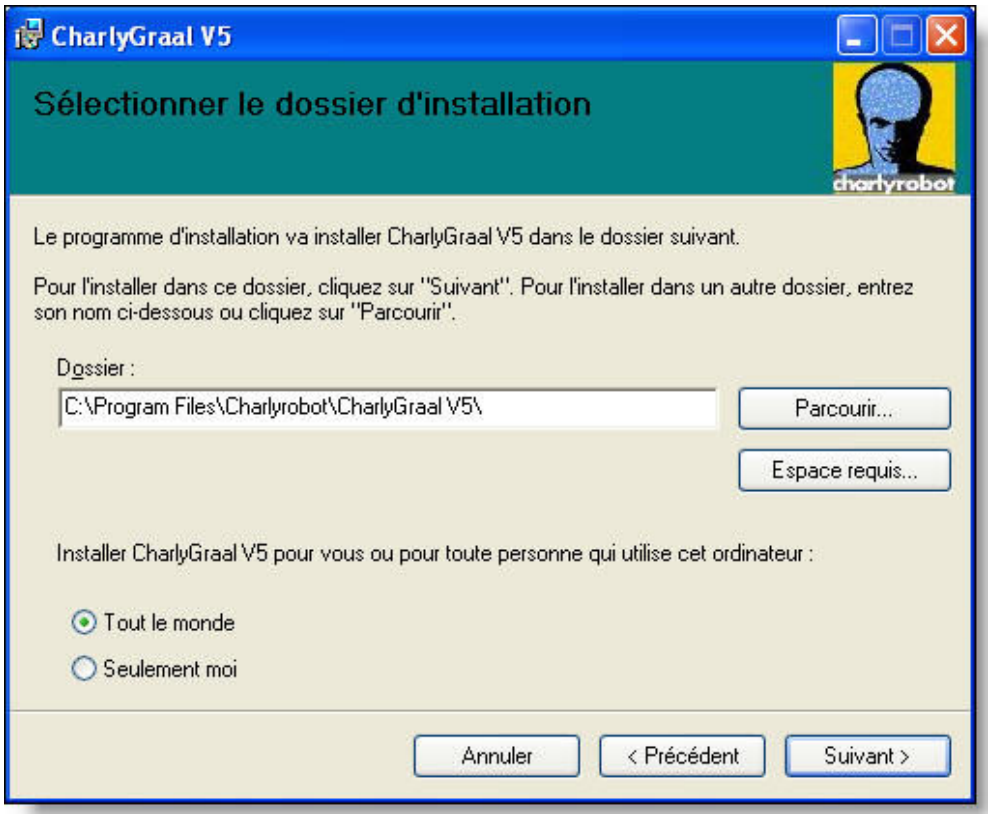
The screen herewith appear. Click on the flag representing the language for the installation and use.

Please enter the serial number delivered with the CD-ROM in the window followed. Consider the uppercases and lowercases.

Read and accept the licences terms, click two times on "next", then enter your name and the company name.



In the following window, choose the installation folder and the user mode, then valid by clicking on "next".



NOTE : In the case of an installation with network rights using roaming compulsory profiles (*.MAN – mandatory), you will need to redefine the profiles once CharlyGRRAL is installed.

Confirm the installation. The installation is continuing automatically and run for few minutes.

When the installation is complete, Click on the button "Close".

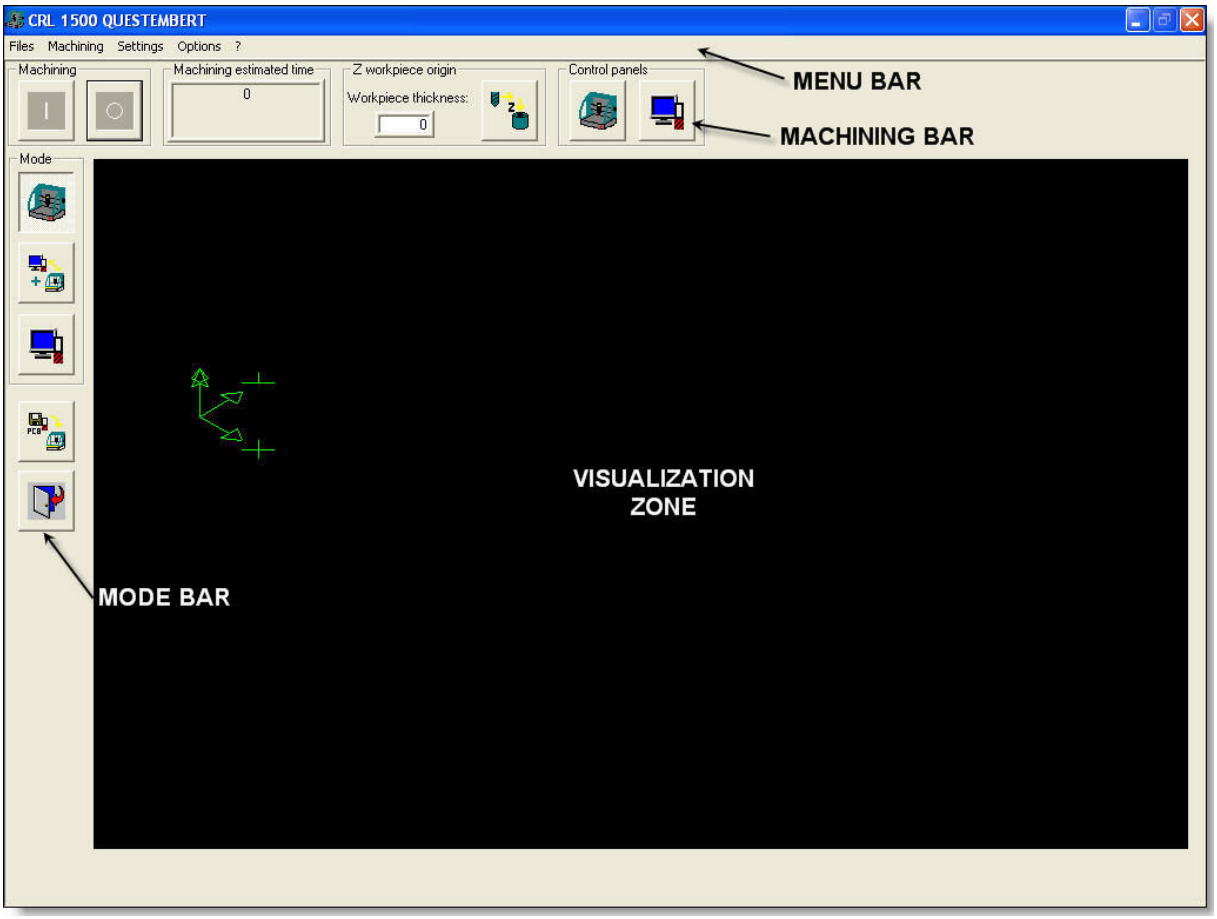
ATTENTION :
Regarding your Windows version, the software might ask you to reboot your system.

In this case, please restart your computer before using the program.

User's interface

Main window

When launch GPILOT, the following window is displayed :



- **The menu bar**
- **The machining bar**
- **the mode bar**
- **The visualization bar**

The menu bar

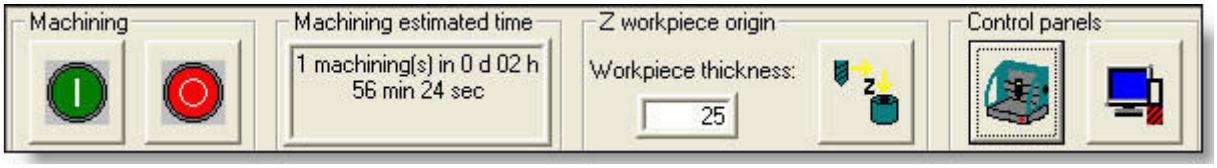
The menu bar displays the specifics menu of GPILOT.

Each menu acces to functions or commands to execute the desired actions :

File menu
Milling menu
Settings menu
Options menu
Help menu (?)

The machining bar

It allows to execute the milling commands.

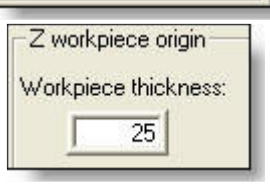


- **Buttons description :**

Launch the milling simply without preliminary tool except if the function "automatic tool measure" as been ticked. Display the milling window or simulation.

Unload the milling file in progess or to eventually load an other one.

Display the estimated milling process.



This value is sent by the CAM of CharlyGRAAL. It can be modify by the operator.

Launch the machining with tool measure. The pilot propose to measure the tool and then launch the machining of the loaded file.

Open the dash board window.

Open the simulation window.

The mode bar

It allows to select the desired function mode.

- **Buttons description:**

Launch the pilot on milling only.

Launch the pilot on machining with simulation synchronised.

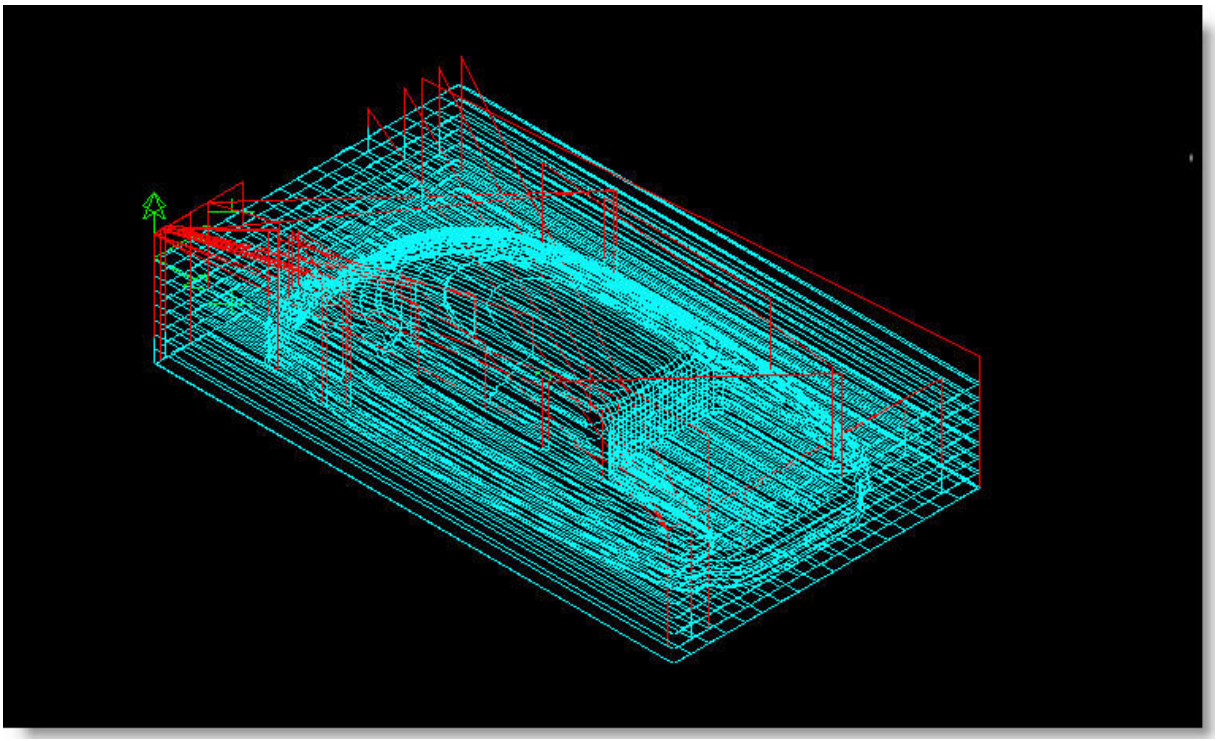
Launch the pilot on simulation only

Load a milling file with a PCB or ISO type
(See : menu file/ open)

Close Gpilote

Visualization zone

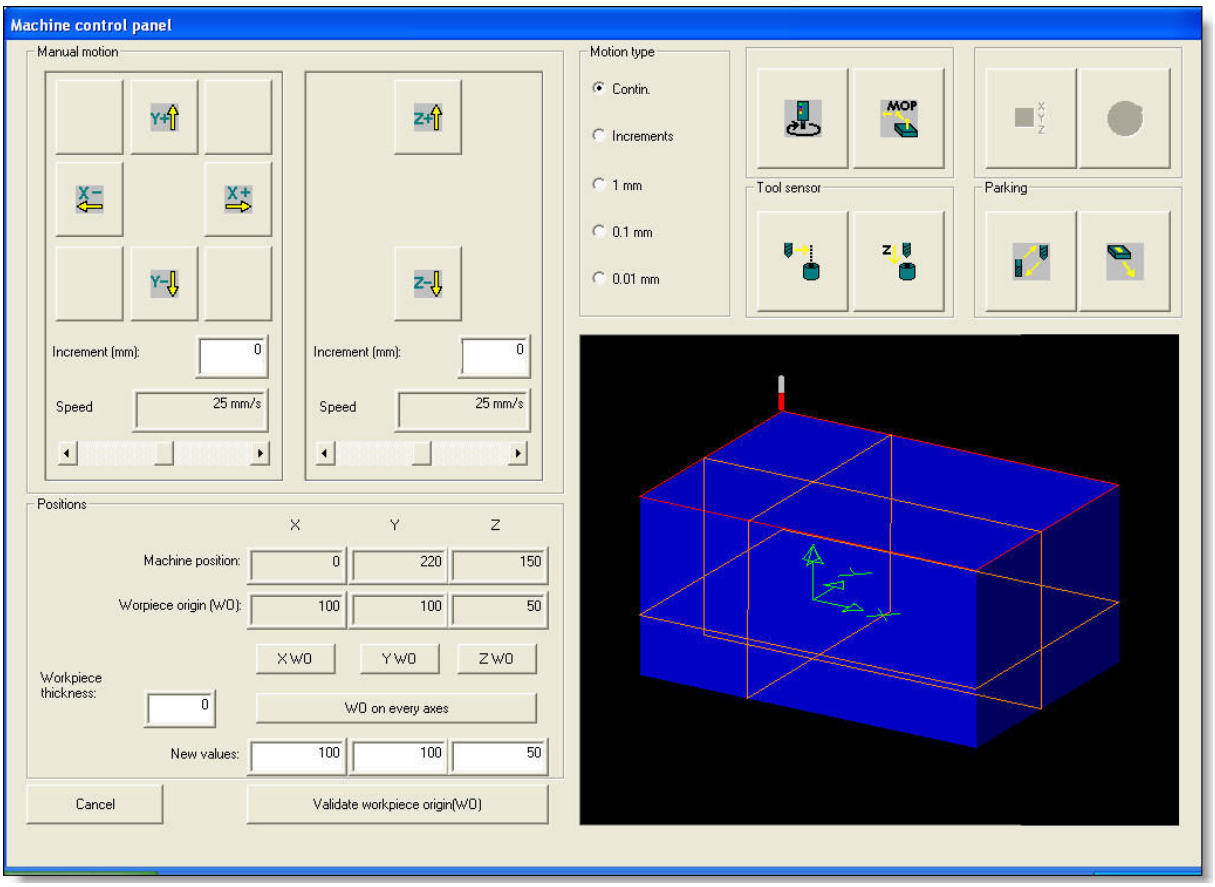
It allows to see the piece machining paths in 3D after loading the file in the milling module.



Control panel

This screen is to set the Working Piece Origin (WO) of the machine and to motion manually the axis.

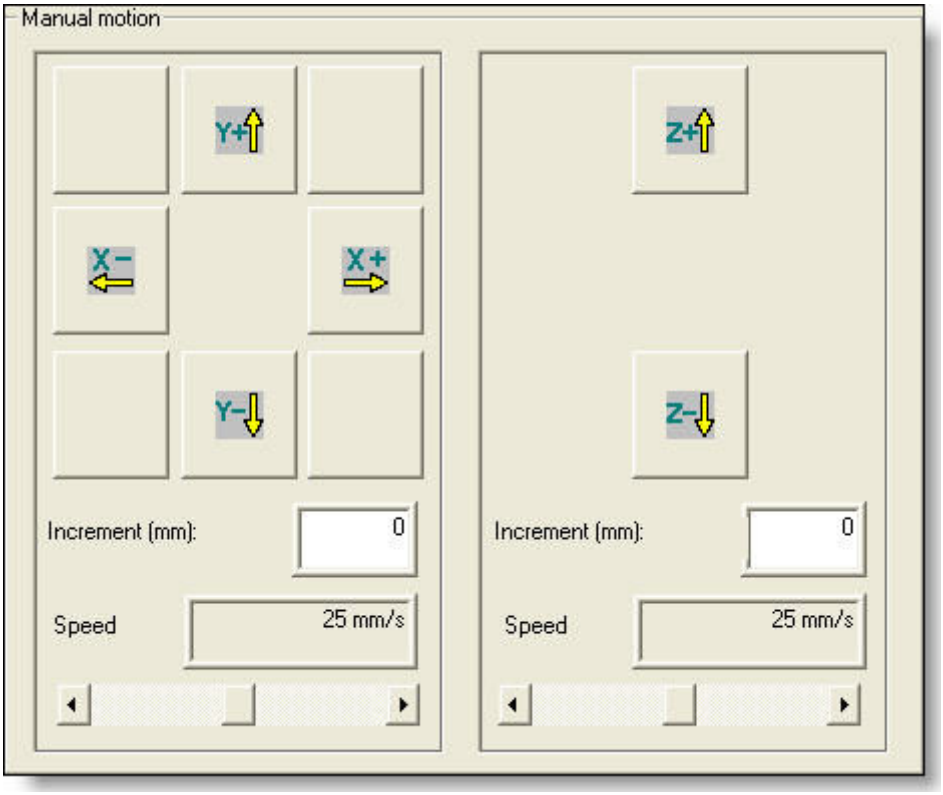
We acces to this window by clicking the button  on the machining bar.



- **Manual motion zone:**

Motions command of the axis X, Y and Z.

By moving the speed cursor, we modify the motion speed of the axis selected.
The window *increment* permit to set a motion value of the axis selected in motion mode.

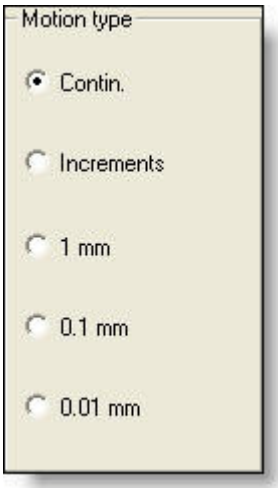


Motion mode zone :

By default, it is on the mode *continu*. Motion the axis by pressing on the manual axis motion button.

In the mode *Incréments*, the motion is about the value set in the increment window in the manual motions zone.

In the mode *1mm - 0.1mm - 0.01mm*, the motion is about the selected value.



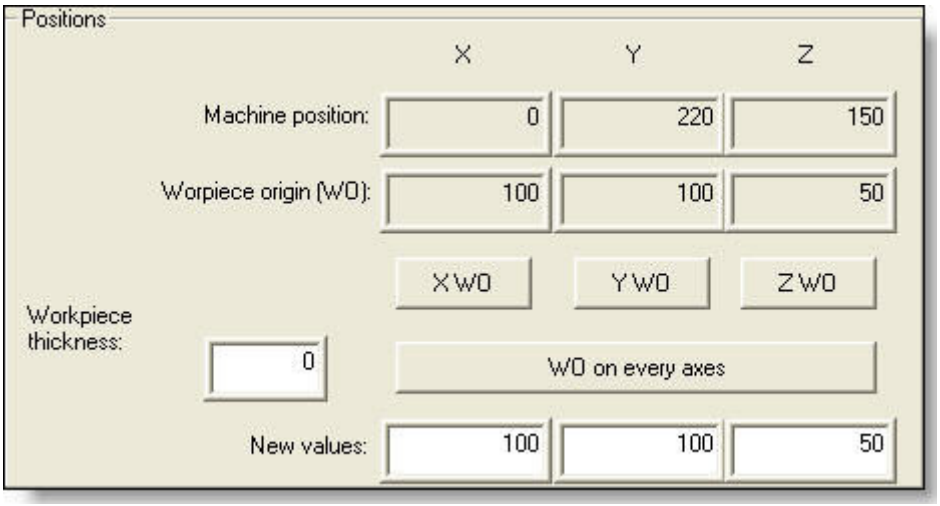
- **Positions zone :**

The machine position indicates the effective spindle position in real time.

The Workpiece Origin indicates the workpiece origin setting.

New values indicates the set of the workpiece origin and allows to manually enter the coordinates of the workpiece origin.

The window *Workpiece thickness* is same as the button on the machining bar. This value is automatically transmit form the CAM of CharlyGRAAL. It can be modify by the operator.



The WO buttons set the position of the Workingpiece origin by axis or on every axis.

The axis position is automatically reported in the *New values* corresponding windows.

The button 

allows to valid the Workingpiece positions in the windows *New values* and displays them in the *Workingpiece origin* windows.

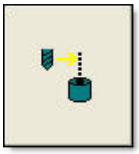
The button 

send you back to the main window and cancel the entered values and the *Workingpiece origin* settings.

- **Buttons zone :**

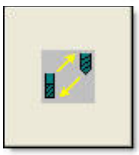

Start/ Stop the spindle (manually)

Machine Origin Positionning (MOP)



Approaching of the tool sensor

Descent of the tool sensor

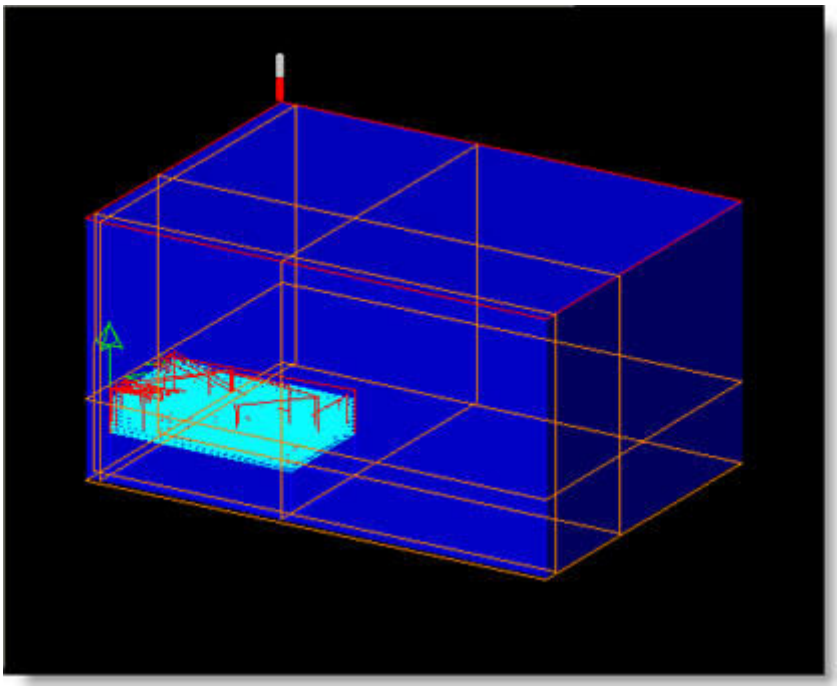


Tool changement parking

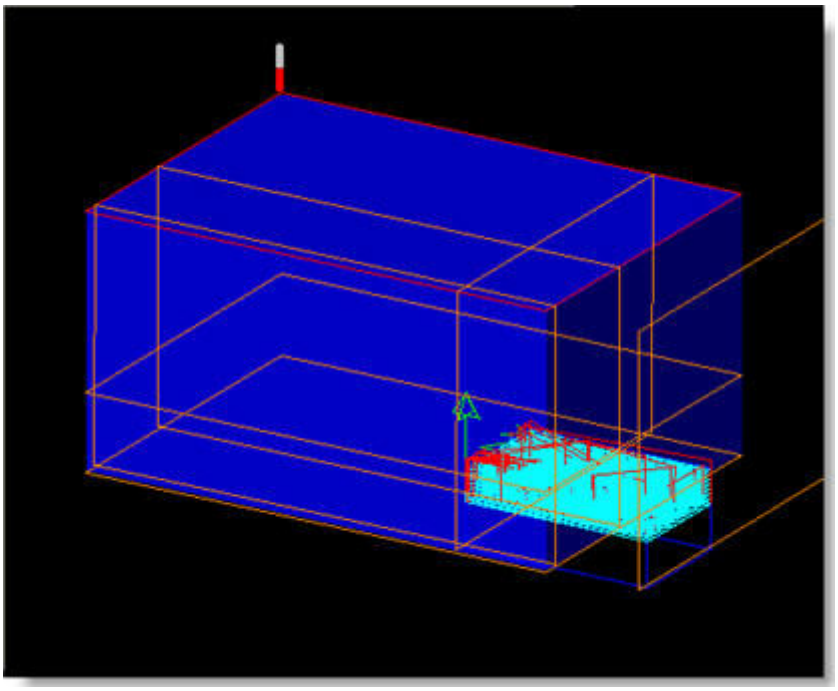
Extrication parking (machine's origins)

- **WO's visualization zone:**

Visualization zone of the piece in the volume machine.
The volume of the piece is displayed around the machine volume with red traits.



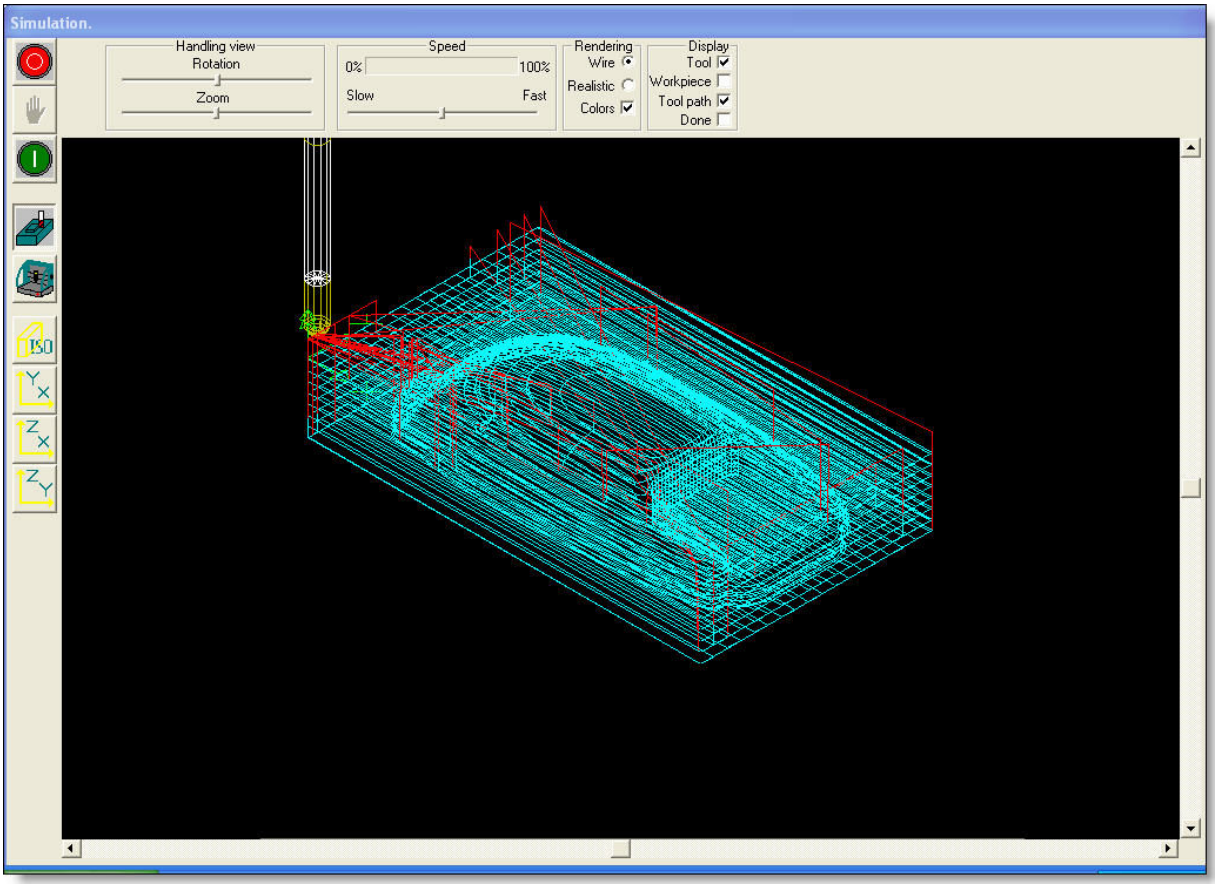
If one of theses red traits is out of the machine volume, your workpiece origin is not correctly set.
The machining can not be realised because you are out of the machine ranges. An error message will display the exceeding range axis.



Simulation window

This window is to visualize the machining path.

WIRE simulation :



The buttons :

To exit the simulation window.

To stop the simulation.

To start the simulation.

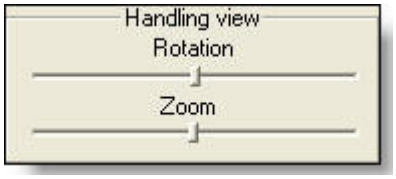
Piece's view.

Machine's view.

Allows to select the view from a different angle during the simulation.

Handle the view :

Setting of the piece viewing by rotation and zoom.



Move the cursors to orientate the piece or to zoom.

You can angle the piece by holding the left click button of the mouse pushed and revolve the mouse in the sense of rotation desired.

You can zoom by selecting the zone of the piece and holding the right clic button of the mouse pushed.

Speed zone :

Simulation speed settings.

Aspect zone :

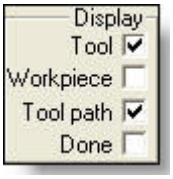
Choose the view of the piece representation between wired view or realistic view.

The piece is represented by the line of the tool's center path.
Representation of the raugh material

The tick *"Color"* display the trajectory with the color defined for the concerned tool.

Display zone :

Display or not of the tool, of the raugh material, of the complete tool path, of the tool path performed

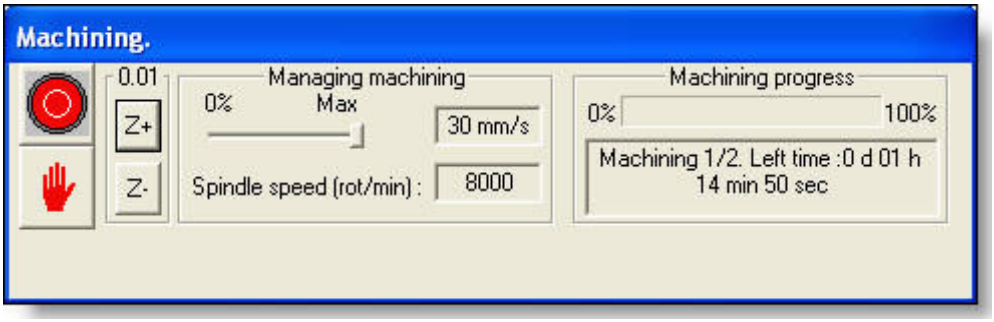


The ticks can be add up in the WIRE aspect.

We acces to this window by the buttons  of the mode bar.

The machining windows

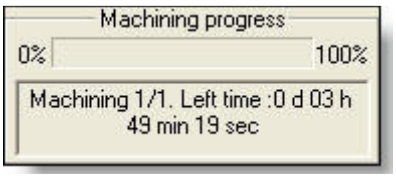
The milling window appear when the machining has started by the button  of the milling bar



This button stops the machining file in progress, and returns to the main window.
It is possible to back take the maching by a last load stage.

This button suspend the machining file in progress, and returns to the main window.

Resumption of the machining by the button of the machining bar.

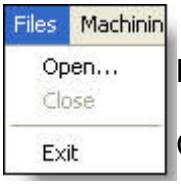


Show the machining advancement state, the remaining time and the number of the machining performed functions of datas captured in the machining mode.

The **SETTINGS** zone is inactive except for certains numeric commands (CNR3) where the cursor *Vmax* correspond to the overdrive of the move speed.

The menus

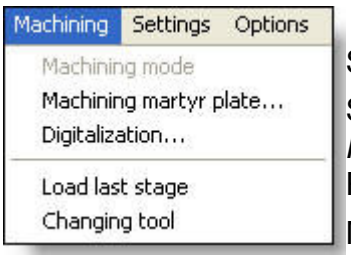
FILES MENU



Load a machining file at the PCB or ISO format.

Close Gpilote

MACHINING MENU



Sequence of spindle High Frequency preheating .

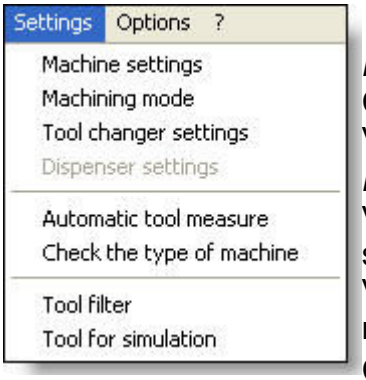
Surfacing martyr plate module.

Non available.

Resume the milling at the last stage

Manual tool changement option "changing tool"

SETTINGS MENU



Non available.

Complementary functions of the machining mode

Valid or unvalid the use of the tool changer

Non available.

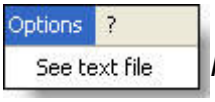
Valid or unvalid the automatic tool measure with the tool sensor.

Valid or unvalid the systematic checking of the type of the machine.

Choice of a tool for a machining.

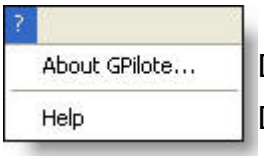
During the simulation, ask to choose a tool in the tool shop.

OPTIONS MENU



Non available.

HELP MENU (?)



Display the version number

Display the on line help

The fonctions

Spindle preheating

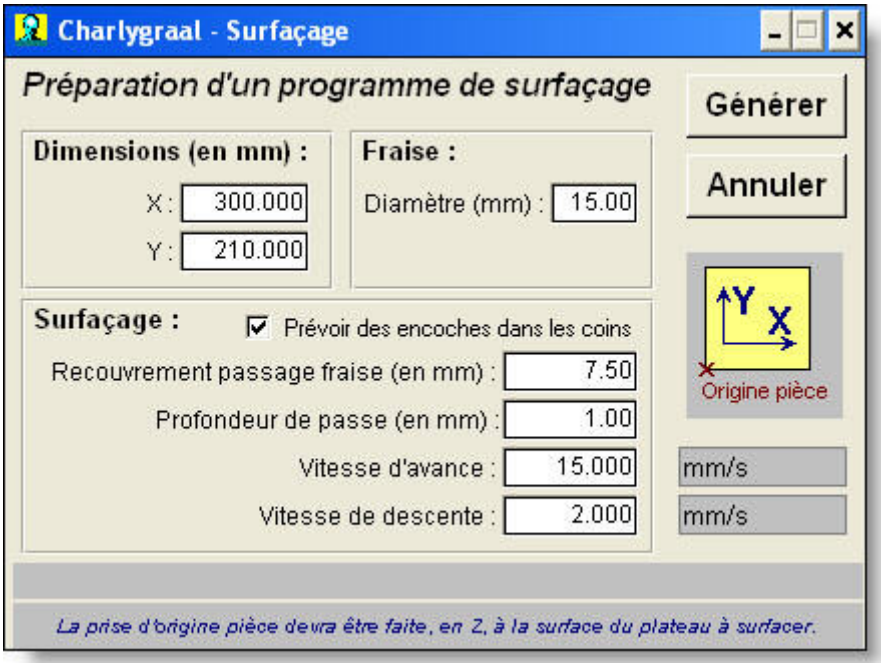
All the hight frequency spindles needs to be preheated before any use.
The spindle preheating sequence is predefinated.

This command in available only for CNR3 numeric command.

Martyr plate machining

Preparation window for a surfacing program, notably to surface a new martyr plate freshly installed.

You can plan a complete surfacing of your plate, or use the surfaced zone to chock you raughs. In this case, plan edges around the surfaced zone, with notch in the corners.



Dimensions :
Enter the X and Y dimensions of the martyr plate(whom needs to be surfaced). In general , it corresponds to the ranges of the machine.

Mill tool:
Enter the diameter of your surfacing mill tool. The tool needs to be a straight tool with 2 cutting teeth.

Surfacing :
Enter the informations for the milling description.

Notch in the corner :
Tick this box to obtain an extrication in the corners and thus be abble to immobilize the piece in a right angle.

Lapping :
Lapping distance of the machining tool path (a light lapping allows to completly take off the matter).

Depth pass:
Depth of the milling in the matter.

As the workingpiece origin is performed on the surface's martyr plate, you here indicate the depth in relation to this point.

Speed :
Speed of the axis XY and Z of the surfacing mill tool.

Descent speed :
Descent speed (in Z) of the surfacing mill tool.

BEWARE, certain surfacing mill tool are not made to start to mill the matter vertically. Plan in this case a low descent speed (around 2 mm/s)

Click on the button "*Generate*"
The surfacing program is generated (Surfa.pcb) and then loaded into the Gpilot.

Before machining, execute your WO (Work piece Origin): place the origin piece towards you, to the left, by tangenting the martyr plate to surface. The milling is quite similar to a classic machining.

Load last stage

When a machining is voluntary or unintentionaly suspended (Because of a power cut for a.e.) it is possible to resume the machining on the last stage..

The machining will be resumed from the last milled stage . A stage is a move above the matter. As an example, for an engraving, it will be on the last engraved pattern.

Reload the interrupted milling file , select the menu *"Machining"* command "*load last stage"*.0

 Beware, it is important to reload the same machining file as the one interrupted.

Tool changer

tool change

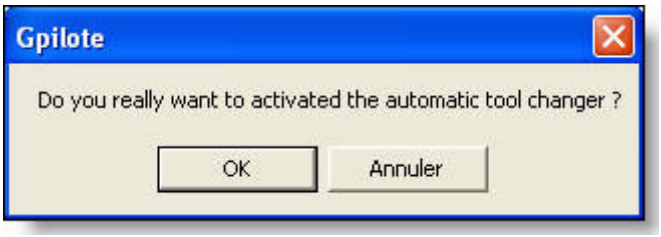
This command is available only for the machines equiped with the "automatic tool changer" option.

It is use to manually change the tools without passing through the changer.

Automatic tool switch

This command is available only for the machines equiped with the "automatic tool changer" option and equiped with a CNR3 numeric command.

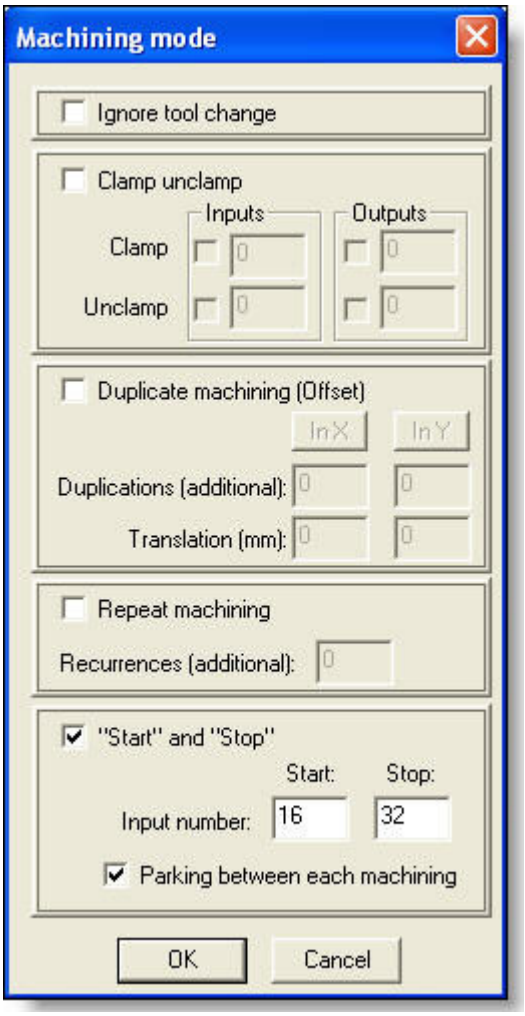
When the command is activate, this window is displayed :



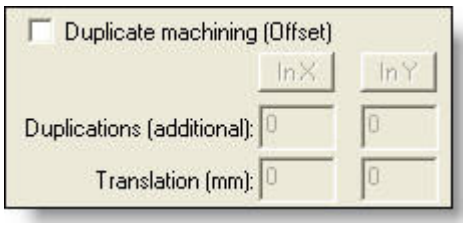
Machining mode

We acces to this command by the menu "settings" .

The window "Machining tool" open:



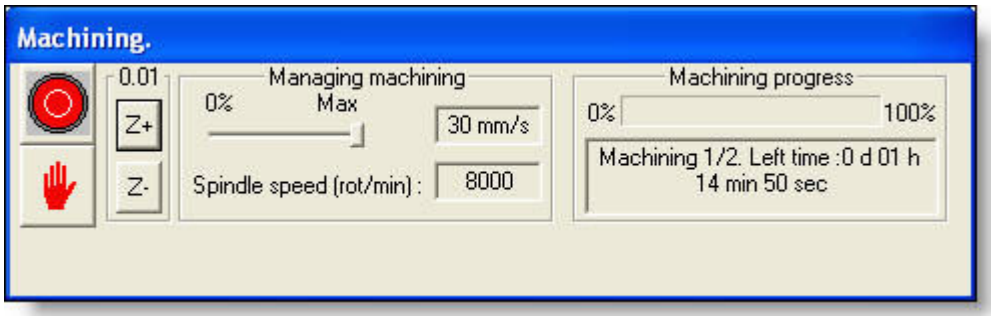
USING THE DUPLICATING MODE OR OFFSET



- Tick the box "Duplicate machining".
- To duplicate on the X axis, click on the button *"In X",* the fields "Duplications" and "translation" become active.
- Enter the number of additional duplications that you wish to realise in the corresponding window.
- Enter the value in mm of the translation you desire in the corresponding window.

Beware, this value is added from the left edge's piece.

- Use the same procedure as the previous one to translate "in Y" or on both axis.
- Valid the window.
- At the machining start, the window "machining" appears incating the number of the machining in progress (left number) and the machining (right number).

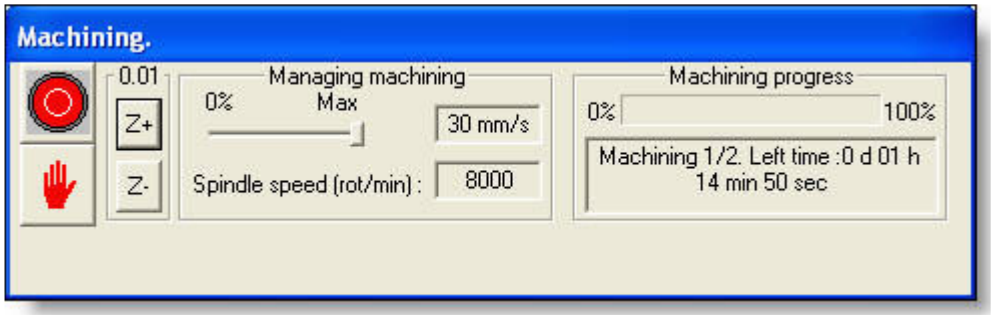


USE THE REPEAT MODE

- Tick the "Repeat machining" box if you desire to repeat your file severals times.

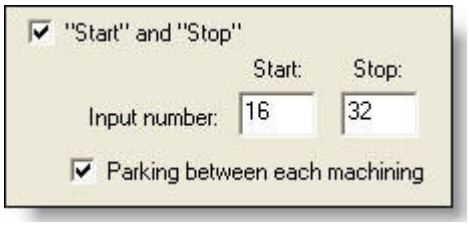
- The field "Recurrences" is active.
- Enter the value of additionnal recurrences in the corresponding field.
- Valid the window.

- At the milling start, the window "machining" appears incating the number of the machining in progress (left number) and the machining (right number).



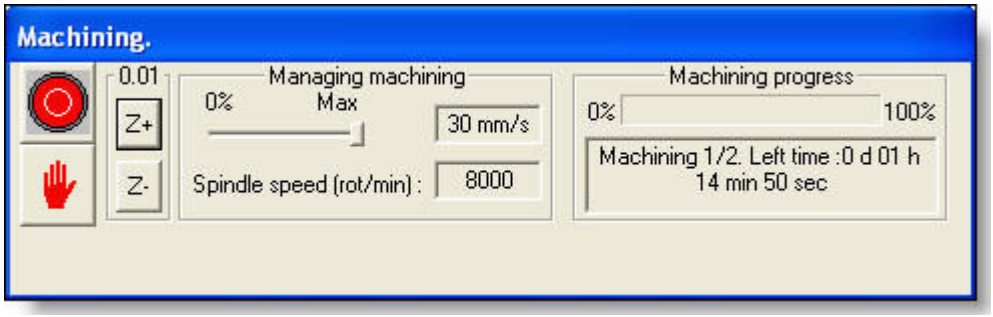
USE THE AUTOMATIC START/STOP MODE

For the machine equiped with the option "start/stop"



- Tick the start/stop box if you desire use the buttons start/stop installed on your machine.
- For the machine equiped with a numeric command type CNR1, the input numbers are :
  - ✓ Start = 240
  - ✓ Stop = 224
- For the machine equiped with a numeric command type CNR1, the input numbers are :
  - ✓ Start = 16
  - ✓ Stop = 32

- If you do not desire a parking return between each machining, untick this option.
  - At the miling start, a window appears asking to press one of the buttons.
  - Then, the window "machining" appears incating the number of the machining in progress (left number) and the machining (right number).



UTILISATION SANS CHANGEMENT D'OUTILS

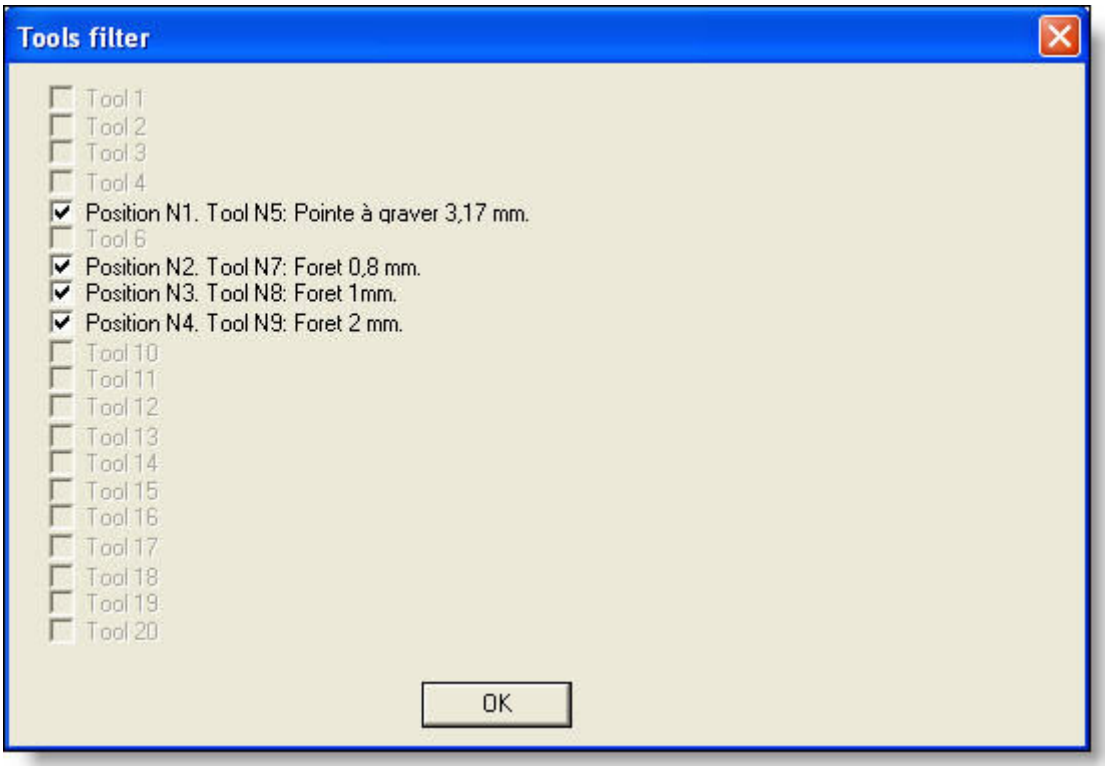
- For a machining with severals tools, it is possible to ignore the tool changement asking (manually or machines equiped with the tool change option) by ticking the box "Ignore tool change".

It is possible to cumulate all machining modes presented above.

Tools filter

This command allows to execute a partial machining by choosing the tool required to machine the sequence .

We acces to this window by the "parameters menu".



Assistance

Technical support

Many questions frequently asked has been respond in the support section and in the database of our web site.

Before contacting out technical support service, please check before if theses ressources bring you answers.

- you can send specifics questions to the technical support by writing an email to the adress : hotline@charlyrobot.com.
- Consultation of the support section on our web site : http://www.charlyrobot.com/2-Web_site_English/D-Support-GB/Support-GB.asp

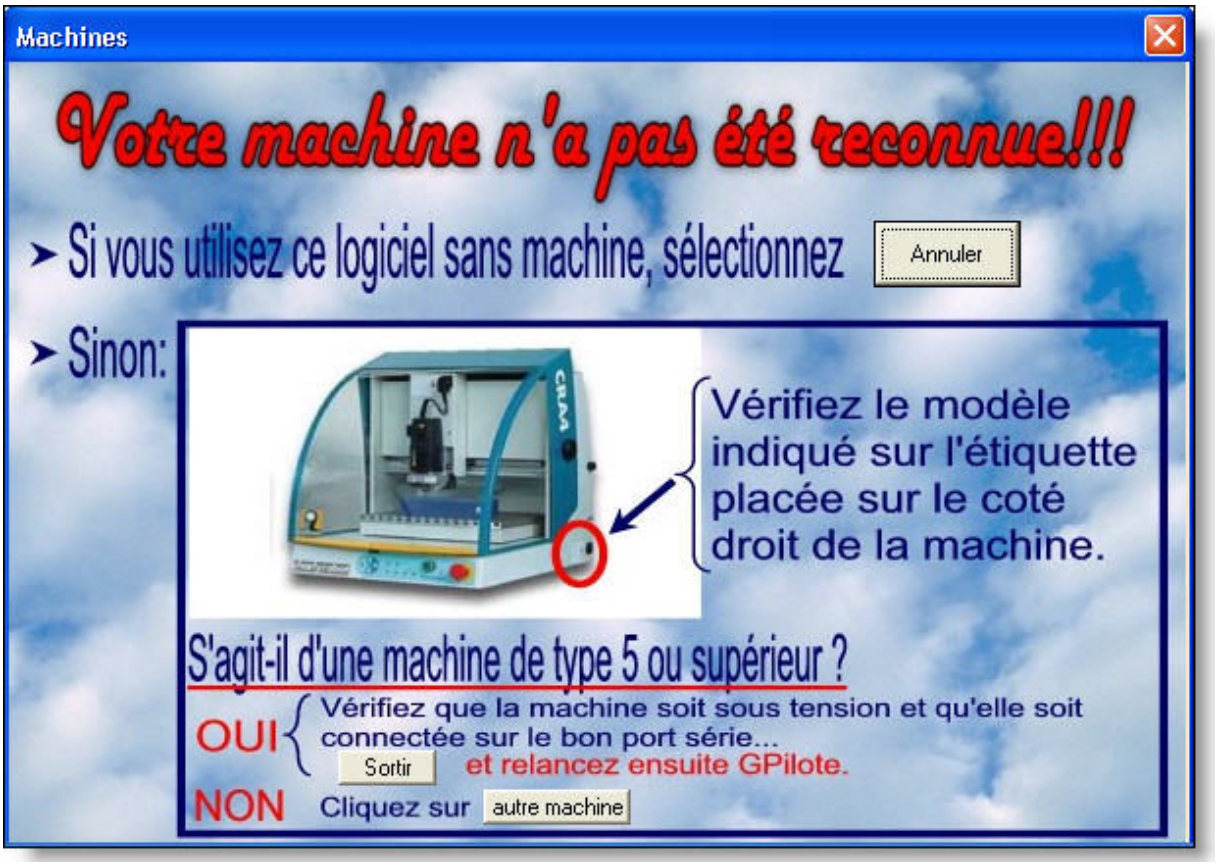
The support section and the data base in english will be complete soon.

Technical help

MACHINE NOT RECONIZED

A – If the following window appears :

- Your machine is earlier than 2001
- Your machine is later than 2001



Machine earlier than 2001

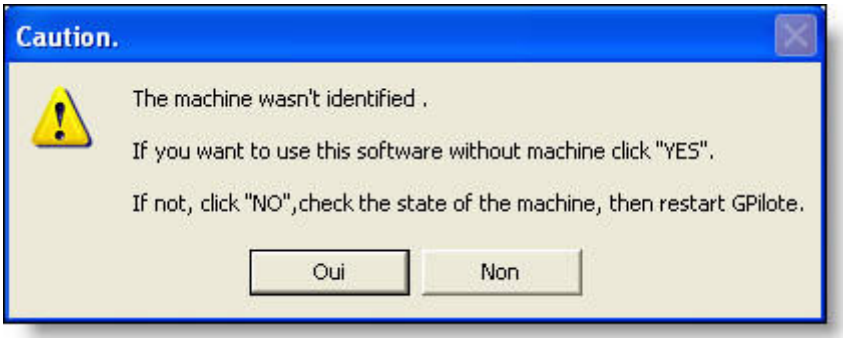
- Click the button *"Other Machine"* then choose, in the list, the tye of the machine you possess.

machine later than 2001 (CRAx > type5 and charlyxU)

- Check that your machine in powered-on.
- Check that your PC in correctly linked to the machine by the serial cord RS232.
- Check that the version of Gpilote correspond to your machine.

B – If the following window appear :

Machine equiped with a numeric command type CNR3.



- Check that the machine is powered-on.
- Check that your PC in correctly linked to the machine by the serial cord RS232.
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On line help

Le fichier d'aide comporte des informations détaillées sur GPILOTE.

La boîte de dialogue Rubriques de l'aide s'ouvre. Elle contient les onglets habituels des aides de Windows, *Sommaire*, *Index* et *Recherche*.

Plusieurs méthodes sont à votre disposition pour obtenir de l'aide :

Vous pouvez en particulier :

- Lancer l'aide par le Menu Aide (?) - Rubriques de l'aide.
- Lancer l'aide par la barre d'outils principale - icone  .
- Appuyer sur la touche **F1** pour ouvrir le fichier d'aide.
- Activer la ligne d'aide accessible par le menu Fenêtre.
- Déplacer le pointeur de la souris au-dessus d'un bouton de la barre d'outils afin d'afficher la "bulle d'aide" qui fournira des renseignements rapides sur la fonction du bouton.
- Les messages de la barre d'état vous informent sur l'opération en cours.

Keyboard shortcut

Echap : Cancel the action in progress or quit the dialog box and by canceling the modification.

Hyperlink

Ce sont les mots soulignés en vert et qui vous permettent de naviguer dans l’aide d’un simple clic comme sur un site Internet.

Index