



Changelog

WinPC-NC 4.1X

This document describes all published new functions, function extensions and bug fixes for all versions. Please scroll to the last used version and read the changelog to the latest version at the beginning of this document.

Explanation of font colour and abbreviation

S L U P F Function/modification applies to *WinPC-NC Starter, Light, USB* or *Professional* or the firmware of the axis controller

blau New function

grün Adaption

schwarz Bug fix

rot Bug fix of an critical error, Update is recommended



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.10/31

Date : 14.04.2024

Minor changes and corrections

L U P

- Minor optimization in contour tracking and radius compensation
 - Program start optimized
 - Fixed an error when saving the global parameters WINPCNC.WPI, which always load to default parameters at the next program start
 - Some forgotten german balloon tips now in foreign language
 - Workpiece area can now be activated independently of occurring Z coordinates
 - Start from... of a job is now also independent of defined JobStart signal
 - Full screen now takes into account a hidden status line
 - Tool 1 is no longer switched by unintentional pressing of the ENTER key
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.10/29

Date : 05.04.2024

Minor changes and corrections

L U P

- Program start optimized
 - Status bar now remains visible on full screen
 - Emergency stop detection and handling optimized
 - Handwheel can now also be used normally outside the machine limits
 - a warning is displayed in the parameter dialogs when tool change=NO
 - + and - keys on the standard keyboard move the Z-axis correctly
 - Suomi texts revised
 - with a fixed length probe, the max. Z depth can now also be calculated and is therefore dependent on the current tool length
 - Job start also with correct speed if tool change=NO is set
-



Version 4.10/28

Date : 25.03.2024

Fixed slow program start under Windows11

L U P

Some users have reported slow and delayed start-ups under Windows11 and sometimes even the operation of the functions was slow and delayed. We have carried out many tests with different computers and were able to optimize the program startup so that it usually runs faster than before and the delays and sluggish operation no longer occur under Windows11. There were no problems under older Windows versions, but the current optimizations also speed up the start here.

Minor fixes

L U P

- Pin query now remains in the old state after profile loading and is no longer automatically active
 - With two OEM keypads, manual driving is possible again with two speeds and the directions are correct again
 - new macro commands MoveAbsXY and MoveAbsXYZ are displayed correctly in the editing window
 - Management of selective profiles was hardly used and therefore hidden
 - Measuring tool length from the tool dialog works again without any problems
 - Correction for manual movement with handwheel
 - Input signals *ArcGood* displayed again with correct text for technology function *Plasma*
 - For *Laser* and *Plasma* technology functions, job start now with correct speed if this was changed immediately before
 - *Plasma* and *Rotary axis* technology possible at the same time
-



Version 4.10/25

Date : 22.02.2024

Minor changes and corrections

L U P

- Adoption of new speeds when switching technology functions
 - Plasma cutting and lasering with input of new values in the dialog boxes of the technology functions
 - Display of the ArcGood signal in the Plasma dialog box
 - **Rotary axis and plasma technology functions can be activated simultaneously**
 - Safety message before opening the collet chuck with automatic tool changer now appears correctly
 - **Rotation of data also possible with NCP and therefore with all formats**
 - Tool color from the color dialog is now correctly adopted and assigned to the current tool
 - activated original Windows file dialog also for the Save as... function
 - Correction during profile loading and transfer of saved settings
 - Correct height display for 2D data and side graphic view, this affected the defined plunge depths and the tool lift distance
-

Adaptation of the start behavior to Windows11

L U P

Under Windows11, certain computers and systems experienced slow or hanging program starts with WinPCNC.EXE. The problem was solved by using several new mechanisms. The program start was generally accelerated



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.10/22

Date : 02.01.2024

Minor changes and corrections

L U P

- For Stepcraft machines, profiles can be saved and loaded again as usual
 - An active user administration is saved correctly
 - Laser power is set correctly for the second job or when continuing after a break
 - Correction for speed-dependent laser power
 - Spindle warm-up function: the individual steps can be skipped by restarting the program
 - Save profile/file : mouse click copies list name to name field
 - Possible position overflow with endlessly rotating rotary axis fixed
 - Improvements and clarifications for some error messages
 - Background color in graphic display is now saved correctly
 - New handwheel/pendant HR-20 added to the settings
 - Offset for mass production can now also be negative
 - Correction for signal messages in *WinPC-NC Professional*, messages disappear with deleted input
 - OEM background image of machine builders is displayed again
 - Hotkeys in the Move manually dialog for starting button
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.10/19

Date : 24.10.2023

Minor changes and corrections

L U P

- Targeted Move can be used again in *WinPC-NC Light*
 - NumLock digit keys enter values if cursor is placed in edit field and will not move axes
 - Function Turning with two points again available
 - disabled basic settings can be entered in touch display again
 - saving a MES file automatically is saved correctly
-



Version 4.10/12

Date : 10.08.2023

Modifications for new USB hardware control

L U

Due to still tense supply situation with certain components and our microcontroller used so far, we have made a redesign of our USB hardware and used a more powerful processor, with which, however, is communicated somewhat differently. In the new version this is recognized exactly and both the old and the new hardware are controlled correctly and in the usual speed. In connection with the old and previous hardware nc100, ncUSB or sc100 there are no differences.

Minor changes and enhancements

L U P

- Correction for start from... function and superfluous start-up movements
 - Cooling and pilot laser signal are now displayed synchronously in the dialog of manual move and in side panel
 - Input field for offset laser pointer/camera now also available if a laser is active in the equipment and thus the pilot laser function is used
 - Technology Laser and speed dependent power now prevents the short switch on during the last empty run
 - correction for polyline in DXF files
 - no more job cancel with windows key
 - when using microvectors in NC files and very high speeds, data transfer can no longer be done in real time and the speed is dynamically reduced a bit
 - progress now goes correctly to 99.99% and then to 100%
 - Buttons in laser test are now displayed correctly and in correct color
 - sidepanel is displayed correctly after loading a profile
 - more accurate times when saving operating data and counters
 - correction at circle commands in PLT_files
 - Macro commands MoveAbs are only executed if reference movement has taken place
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.10/07

Date : 01.06.2023

Minor changes and enhancements

L U P

- HPGL files with arc commands are executed correctly
 - Operating data times even more accurate
 - Macro commands MoveAbs are only executed if the machine is referenced
 - Correction in plasma cutting sequence
 - Security pin query for Stepcraft machines, can be changed and switched off
 - individual list for signal test shows all input states
 - macro commands wait time now correctly displayed in ms
 - macros at program start and program end are executed correctly
 - messages during execution of macro commands, thus waiting for an input is also visible and noticed
 - Layout of laser test functions adapted
-



Version 4.10/05

Date : 15.03.2023

New version WinPC-NC V4.1 released

L U P

All previous functions, changes, enhancements and bugfixes of the previous version V4.00/67 are of course included.

Levelling and projection of nc data

U P

The special function DIGITALIZE can be used to scan a non-planar surface, create a background table from it and then project an engraving or milling or any other NC data onto it. The resulting Z-heights are automatically adapted to the surface. Detailed descriptions and examples can be found in a new HowTo manual on our homepage under Help - How to...

Alternative communication to the axis controller via Ethernet

P

With our new axis controllers there is the option of a network connection instead of the previous serial COM connection. The new axis controllers can be ordered, but a conversion of old controllers is not provided and the housings do not even offer the possibility to retrofit this connector.

With Ethernet connection the communication is much more stable and reliable.

A detailed description of the commissioning can be found in a new HowTo manual on our homepage under Help - How to...

Definition of critical or protected areas

P

In the parameters, up to three protected areas can be defined, each with min/max coordinates of the XYZ axes, and these are monitored by the axis controller. If one of these limits is exceeded, a stop and an error message are issued immediately. The area must then be left again with manual jogging before further actions or a new job start are possible. The monitoring can easily be switched on/off with a switchable button on the screen, which is necessary e.g. for manual moving free. After a reference run or at the job start the monitoring is automatically active again and cannot be forgotten by mistake.

Detailed descriptions and examples can be found in a new HowTo manual on our homepage under Help - How to...



Changelog **WinPC-NC Version 4.1X**

Learn which new functions are included in your latest version of **WinPC-NC**.

User management and password

U P

To protect against unintentional or unauthorized changes to the settings and programs, a three-level user administration can be activated. The *operator* can load and execute jobs, but cannot make any changes. The *expert* can set up new jobs and change project-specific parameters, and the *service employee* can do everything and has access to all settings. As an *expert* and *service employee* you can log in with a definable password.

New firmware at the axis controller necessary

F

For **WinPC-NC Professional** and the axis controller the new firmware 1.62/11R is required, which is included in the update package.

Many minor changes and enhancements

L U P

- Macro instructions for absolute travel with several axes
 - technology function rotary axis also with Gcode programs
 - switchable warnings at job start above button and magazine
 - switchable automatic save at job start and program end
 - output signals when zero point, parking position and reference point are reached
 - various functions for machine safety
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.00/67

Date : 22.02.2023

Minor changes and fixes

- To meet further requirements of the machine safety guidelines, it is now possible to define a safety pin that is queried before critical functions are activated. This prevents an unintentional start even without the protective hood function.
 - Anyway, we recommend strongly to use a protective hood and housing including a monitored contact for safety reasons
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.00/65

Date : 26.01.2023

Minor changes and corrections

- at program start and reading of parameters already correct axis display
 - Keypad operation at JobStart corrected
 - Change of speed X4 is accepted immediately
 - New display of the graphic when changing the plunge depths
 - Improvement of some driving functions with open protective hood
 - Automatic reloading of the file now recognizes when it is no longer available, e.g. from a USB stick
 - speed parameter with 5 digits before the decimal point
 - ESC and stop key on keypad is accepted correctly
 - Inputs into the endless field during manual driving are possible again
 - Macro moves at the end of the job can now be aborted immediately with ESC
 - Stop button in targeted traverse also active during spindle ramp-up time
-



Version 4.00/61

Date : 07.12.2022

Minor changes and corrections

L U P

- during *targeted move* and spindle start a message box appears during ramp-up time, after abort the message box remained visible
 - Graphic display is automatically placed correctly during rotations
 - File open filter with *.Gcode name extension added
 - Tool change dialog and macro *PreMeasure*, when waiting for a signal e.g. from drawer an abort could lead to a hang up
 - step by step driving or single steps runs again with keyboard and keypad
 - *Targeted move* : new checkbox to execute move without cooling and without spindle, output signals and spindle speed are now set correctly
 - open manual drive dialog sometimes showed *endless* in menu, but old selected distance is still set
 - resetting an X4 zero point was not immediately displayed in the axis positions
 - Camera and laser pointer or pilot laser can now be activated separately, correct detection and message if no camera is found
 - Approaching of adjustment points for angle determination now also possible with camera and laser pointer
 - open housing also recognised when moving with handwheel
 - Laser speed = 0 now possible and then use of feed rate from file or parameter settings
 - programmed waiting times exactly kept even with several minutes or hours
 - in Gcode files now also [square brackets] are accepted as comment lines
-



Version 4.00/58

Date : 11.11.2022

New buttons for pilot laser and camera in manual jogging

U P

In the dialog of the manual jog and in the sidepanel you can now switch on/off a defined laser pointer/pilot laser and a camera separately. It is now also precisely differentiated whether spindle is switched with standard speed at the PWM output or the pilot laser with defined low laser power, if the LASER technology is active.

Switch to old and original Windows file open dialog

L U P

In the new and touch-optimized dialog for file opening you cannot access the network without drive letters and some users did not like the new layout of the dialog. It is now possible to select the use of the Windows dialog directly in this window or in the parameters under Misc. settings-display as an alternative.

Minor changes

L U P

- Sidepanel and signal test now show correct spindle/cooling outputs
 - keyboard input during targeted movement possible again
 - automatic brakedown of **WinPC-NC** when disconnecting a USB device like mouse or keyboard fixed
 - during waiting times the correct feedrate is now displayed
 - with technology laser the laser speed can be zero now and then it is taken either from the NC file or the parameter settings
 - display of 4th axis in the side panel during a job corrected
 - with open housing now also move to the zero point is rejected

 - Plasma technology with correct cutting speed
 - Save positions at the end of the program now after last handwheel movements
 - Save as... in editor possible again
 - Editor, menu operation changed and open menus close automatically
 - ESC key now also cancels moves in tool changer or in tool dialog box
 - Correction in the 2DCAM functions during nesting
 - when rejecting a requested reference move, there is now a warning that the machine limits cannot be monitored. This requires the exact knowledge of the positions and a new reference run.
 - Text corrected for spindle warm-up function
 - Minimize and maximize with touch view works without problems
 - Change of views in manual movement, e.g. handwheel or softstick, only possible when all axes are stationary.
 - loading of a profile also causes reload and new display of the NC file
 - in some situations the correct spindle speed or laser power was not set at job start, this is fixed now
-



Version 4.00/53

Date : 09.08.2022

Loading of profiles no longer resets machine positions

L U P

Until now loading of a saved profile accidentally resets current machine positions even if machine was not moved. This could also cause problems in monitoring dimensions. Now this problem is fixed.

Old dialog for file open instead of new touch dialog

U P

If you don't like the new and touch optimised dialog for opening new NC files you can switch to old and well known Windos dialog by modifying the line WINDIALOG=1 in file WINPCNC.WPI

Minor changes

L U P

- more functions and dialogs can be closed with ESK key
 - job dialog now has new buttons and can be controlled via keyboard keys
 - a new foreign language common spanish was added as an alternative to the old technical spanish
 - reset of NC file window at job end
 - braking angle also works if Z movements took place
 - fix at moving to surface block and clear error messages if it fails
 - open camera window will be closed with manual jogging and automatically shown again at next jogging task
 - simply switching from pendant to keyboardr moving
 - moving to surface block now checks ddefined limits and dimensions
 - fixing axes in softstick function corrected
 - Signaltest und slider move does no longer switch off laser signal
-



Version 4.00/51

Date : 07.06.2022

Possible hangup with bouncing sensor probe signals fixed

U

In case of extremely bouncing probe signals WinPC-NC could run into a hangup when measuring edges or tool lengths. This problem is fixed now.

Signaltest and laser signal

UP

An active laser signal no longer is cleared when moving with slide bar.

Switchable warnings

LUP

In parameter settings at Misc.settings-Display several warning situations can be checked and two new warnings are „Jobstart above sensor“ and „Jobstart above magazine“.

minor changes

LUP

- Text for active camera in jogging dialog keeps at E-Stop
 - more and detailed protocol output
 - warning at rejected reference move that machine area monitoring is not possible
-



Version 4.00/50

Date : 24.05.2022

Length check before and after ATC

P

If an error is detected at length check before magazine release or after magazine grab there will be an error and it can be handled manually. At resume of job the length check is done again to verify the korrekt mounted tool.

In a second modufication the messure tolerance can be defines different as 0,2mm which was default.

Movements at tasing plate are monitored by machine dimensions

U P

All movements now are checked against defines machine dimensions and borders and no movement will take place behind.

Z axis is lifted only by defined tool lift height

Minor changes

L U P

- faster tool selection in tool menu

- Resume of a job now uses correct Z lowering speed at first position
 - Correction of wrong program display in Gcode window
 - after movement to Z sensor the retract distance is at least 5mm and machine limits are checked
 - NC program code window no longer stays in foreground
 - full integration of new wireless KP-10 keypad
 - machine area checking also at jobstart from pendant
 - correct workpiece position display after loading a new NC file
 - correct display of spindle and cooling indicator in sidepanel
-



Version 4.00/47

Date : 11.03.2022

Maschine selection accepts pin assignments again

P

At certain OEM versions a machine selection dialog can be activated at first startup. As a bug some pin assignments were not transferred correctly to axes controller.

Synchronous Y axis with automatic align

P

WinPC-NC Professional was able to handle double and synchronous X axes and now also can handle a double Y axis. The alignment with help of two reference switches is same as before for X axis. A new input signal I171 RefYb was defined to assign the pin no of the RefYb switch and enables the function.

Note, to use this new function the firmware 1.62/08R or newer is needed at controller.

New output signals for In-position-status

P

There are three new output signals which can be assigned with a special pin no.

Q200 InPositionZeroXYZ

Q201 InPositionParkXYZ

Q202 InPositionRefXYZ

All outputs will be HIGH if axes XYZ are at the defined positions within a tolerance of 50µm.

Minor changes

S L U P

- tool probe will no longer move back too high
 - bugfix at Start from... function
 - fix at keypad from CNC-Step
 - loading of next job at automatic repetition much faster
 - tool measurement sometimes shows uncaused error „Probe not free“
 - stop homing with keypad is now possible
 - new bluetooth keypad KP-10 included, available at shop
 - save tool length even as global system settings and not only for project
 - M00 stop command in Gcode now can be quitted by external start signal
 - faster new job start if automatic repetition is active
 - faster and save communication to hardware at session start
 - file open dialog now saves name filter
 - bugfix at spindle warmup function with dwell times
 - single step job start now works even in side panel
 - active camera is automatic opened if reentering manual jogging- manuelles
 - bugfix at entering digits in manual move dialog
-



Version 4.00/42

Date : 03.12.2021

Resume a job with correct feedrate

UP

Resuming a canceled job now starts with the last active speed and not accidentally with set but inactive laser speed.

Plasma cutting and lasering uses also speeds from parameter

UP

In special technology functions for Plasma and Laser the cutting speeds can be defined to zero =0 if you want to use the speeds defined in tool parameter settings. Otherwise the cutting speeds are used for the complete job.

Fix mounted surface block and material height

UP

As a complete new function a surface block probe can be mounted at a defined place and being used not only for length measurement but also for defining a Z zero point with a certain tool. At each surface probe movement **WinPC-NC** lifts up the tool, moves to defined probe position and measures the Z zero point on top of the machine table. If a material height is defined it will be subtracted and the new Z zero point is calculated on top of material. This enables you for a much more flexible zero point definition.

Tool length measurement for checking ATC or broken tool

P

If an ATC is enabled and tool length compensation you can enable additional length measurements before releasing a used tool to check if it is broken. The new length is compared to the known and if it is a difference more than 0,1mm an error is shown and the job will be canceled.

In addition you also can check the tool length after releasing and after grabbing a new tool to verify the correct fixing of the new tool and the correct releasing in magazine. The new checking measurements can easily be skipped to save time.

Minor modifications and fixes...

SUP

- a selected file display filter now is kept for later use and reopened dialog.
 - tool tip for Z probe is corrected
 - with inverted PWM signal pin realtime spindle speed is now correct
 - finishing multiple cuts even at last element in DXF files
 - at job start machine first moves in XY to first cutting position and in a second step tool down. This old function now is enabled automatically and by default.
 - ESTOP signal is debounced and there are no reactions any more on short peaks
 - moving to XY zero point in touch display
 - movements in side panel can be stopped with ESC key
 - profiles with settings are no longer saved automatically
-



Changelog **WinPC-NC** Version 4.1X

Learn which new functions are included in your latest version of **WinPC-NC**.

- special functions-signaltest shows correct minimum spindle speed in slider
- position input by digit keys at cursor block are no longer interpreted as moving keys
- homing with active backlash steps clears axes positions to zero now
- position moves by pendant can now be canceled and stopped with pendant

again. An additional STOP button clears manual move dialog.

- after new installation **WinPC-NC** no longer starts in full screen mode
 - in old manual jogging dialog hotkeys will work again to save and move to even as switching spindle and cooling
 - keyboard keys bug fix in Light and Starter version
 - molette keeps closed after warmup function
 - Manual movement while tool change prompt works correctly
 - with ATC the commands T0 and SP0 will release last tool in magazine
 - camera offset valid again in sidepanel display
 - size and position of camera window will be saved
-



Version 4.00/36

Date : 06.09.2021

Tool colors will no longer change with new file

S U P

When loading a new file without parameter settings it could happen that existing tool colors get modified. This is fixed.

Foreign languages in Unicode format

S U P

Foreign languages in file WINPCNC.LNG2 are now selectable again.

New file open dialog now sizeable and with slider between panels

U P

The new and touch optimised file open dialog is now resizable and has a slider to modify the field of directories and files. With this enhancement even long folder names and file names can be shown correctly. All of this settings keep saved after current session and will be shown again in next session.

Signal for laser in function signaltest

S U P

An active signal for conneted laser is automatically cleared at function end as well as ESTOP situation as active.

New zero point at tool change can be defined without problems

U P

At prompting a tool change during a job you can move to a new zero point position manually and save them.

Minor fixes...

S U P

- text size corrected in different message boxes
 - technology laser now has a better design and modifying settings will cause a reloading of the nc file.
 - in targeted movement the text lines are corrected in length
 - better display in file open dialog when using network drives
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.00/35

Date : 20.08.2021

Needed firmware update will be propted

F P

The new version V4 of *WinPC-NC Professional* also needs a new firmware running at axes controller cpu. An according info message is show at program start and at job start. The new firmware is already copied into the installation folder and a PDF information how to update it is also available. The new functions can be run with new firmware at controller only.

Minor fixes and enhancements

L U P

- Technology - Plasma cutting : single parameter settings are not enabled/disabled correctly.
 - Error in display of sidepanel in function *Targeted move*
 - Incorrect display of network drives in our new and touch optimised file open dialog.
 - Alternatively you can change to the common Windows file open dialog by changing the line WINDIALOG=1 in file WINPCNC.WPI
 - Loading profiles now will replace and activate all included macros.
-



Changelog *WinPC-NC* Version 4.1X

Learn which new functions are included in your latest version of *WinPC-NC*.

Version 4.00/32

Date : 06.07.2021

First launch of new version V4

S L U P

After more than two years development and testing we are ready publish the new version of WinPC-NC.

In a first step you can install the new version in parallel to any old version V2 or V3 and into a new folder and in case of any unclarity or just to compare settings you easily can start the old version like before.
