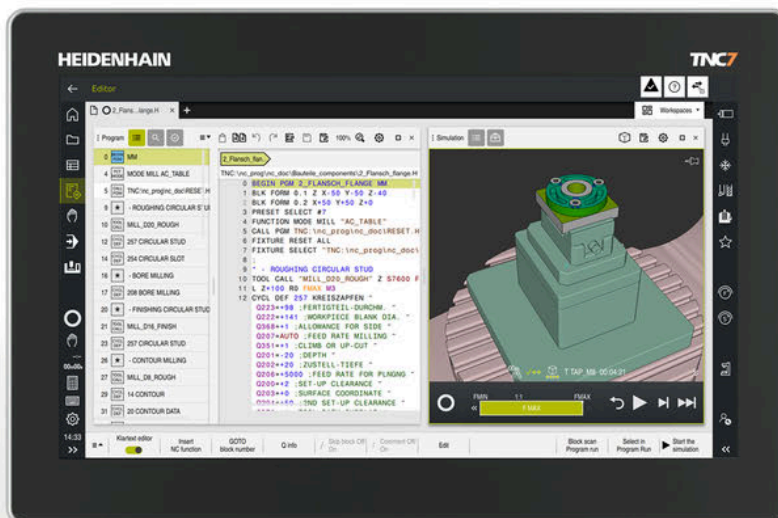# HEIDENHAIN

User's Manual Supplement

TNC7 basic 81762x-19 SP1

Overview of New and Modified Software Functions

About this document

This document describes only new, changed, and enhanced functions of the TNC7 basic with NC software 812762x-**19 SP1** compared with NC software 812762x-**19**.

This document is solely for the purpose of supplementing the User's Manual of the TNC7 basic with NC software 81762x-18 from 09/2024.

The chapters are structured as follows:

- New software options
- New functions
- Modified or extended functions

The contents of the subchapters are subdivided and sorted according to the chapters of the User's Manual. This makes it easier for you to find the corresponding information in the User's Manuals.

If a content is part of a software option, then the option number is indicated in parentheses.

> **Complete Edition User's Manual**
>
> All of the control's functions that are available to the user are described in the **Complete Edition** of the User's Manual.
>
> The **Complete Edition** is available as a PDF for NC software 812762x-19. ID 1411730-01
>
> **https://content.heidenhain.de/doku/tnc_guide/html/en/**

1 New software options

1.1 Process Tracking Interface (#3-04-1*)

Topic	Description
Software option PTI 8 channels (#3-04-1*)	This software option provides an interface for recording control and process signals at a scanning interval of up to 3 ms. With PTI, you can record live information about axes and spindles.
	The signals can be used, among other things, to create a digital workpiece twin in order to meet documentation requirements in the aerospace industry.
	This software option is available only for controls with **SIK2**. You can order this software option up to two times, each time selecting up to eight channels for recording.

2   New functions

2.1   Files

Topic	Description
The **Open in text editor** button	The **Open in text editor** button of the **Files** operating mode opens the selected file in the **Text editor** workspace. You can open every file type in the **Text editor** workspace. **Further information:** "Icons, buttons and shortcuts", Page
The **Settings** window	The **Timeout für Netzlaufwerke** setting has been added to the **Files** operating mode. You can enter a timeout period in seconds. If a network drive cannot be accessed before this period has elapsed, the network drive and the paths or files contained on this network drive will be dimmed. As soon as the network drive can be accessed again, all function will be available again. **Further information:** "File management areas", Page

2.2   User aids

Topic	Description
The context menu of the **Files** operating mode	The context menu of the **Files** operating mode provides the **Show as document** function. This function opens the selected file in the **Document** workspace.
The **Search** column	The following checkboxes have been added to the **Search** column of the **Program** and **Text editor** workspaces: ■ **Case sensitive** If you select this checkbox, the control will do a case-sensitive search. If you, for example, search for **tool**, the control will ignore **TOOL**. ■ **Regular expressions** You can use regular expressions to include criteria in the search term. This allows you to search for a specific character string, as well as, for example, to search for all rows meeting the defined criteria. If you, for example, define **Q...**, the control will search for all Q parameters with a 3-digit number.

2.3 Opening CAD files with CAD Viewer

Topic	Description
The **Hovering** mode	The **Hovering** icon has been added to replace the **Rotate** mode.
	If **Hovering** is active and you swipe across the CAD model during touch operation, the control will display selectable options in orange. The function is comparable to hovering with a mouse. As soon as you stop the movement, the control will mark the current selection option.
	If **Hovering** is active, you can no longer rotate the CAD model.
	Further information: "Screen layout", Page

2.4 Touch-probe cycles for workpieces (#17 / #1-05-1)

Topic	Description
Machine parameters	The optional machine parameter **trackAsync** (no. 122503) for machine manufacturers has been removed from software version 19 SP1.

2.5 The Settings application

Topic	Description
Code numbers	The **Home** operating mode icon shown in the TNC bar changes if the code number 123 is enabled. The icon additionally shows an unlocked padlock to illustrate that machine parameters can be accessed.
	Further information: "Code numbers", Page
The **Erweitertes Logging** menu item	The **Erweitertes Logging** menu item has been added to replace the optional machine parameter **extendedDiagnosis** (no. 124204).
	If this function is active, the control will save graphics journal data. These data may be needed by HEIDENHAIN Customer Service for diagnostic purposes. If you activate this function, you need to restart the control. Deactivate this function after the fault has been fixed to reduce the amount of memory used.

2.6 Machine parameters

Topic	Description
Open context menu	For all objects in the configuration editor, the control provides an icon that opens the context menu. Objects are shown by a folder icon.
The **Highlight change** button	The **Highlight change** button has been added to the function bar of the configuration editor. The control marks the selected machine parameter as changed, even though the value remains the same. The machine manufacturer can use this function for testing, for example. **Further information:** "Icons, buttons and shortcuts", Page
Expanded logging	The optional machine parameter **extendedDiagnosis** (no. 134204) has been removed. Instead, you can activate the saving of graphics journal data in the **Erweitertes Logging** menu item of the **Settings** application. **Further information:** "Overview", Page

3 Modified or extended functions

3.1 Status displays

Topic	Description
The **Status** workspace	On the **Tool** tab, the control shows the tool life in minutes instead of in hours and minutes. This format is also used in tool management. **Further information:** "The Tool tab", Page
	On the **Tool** tab, the information about the tool axis and tool type has been integrated in the **Tool information** area. There is no longer a separate **Tool type** area.

3.2 Powering on and off

Topic	Description
Configuration files	During booting, the control checks whether all the needed configuration files are available in the **TNC:\config** folder and on the **HOME:** drive. If a file is missing, the control recreates the file and resumes booting.

3.3 Programming fundamentals

Topic	Description
The **Program** workspace	In the NC program, cycles have multiple lines but just one block number. The control will automatically remove any additional block numbers if a cycle later contains lines with a block number due to a text editor or a CAM output, for example.

3.4 Coordinate transformation (#8 / #1-01-1)

Topic	Description
The **PLANE** functions	The control can execute **PLANE** functions containing **MOVE** and the **ABST** syntax element. This increases compatibility with earlier controls. If you edit an NC block containing **ABST**, the control will automatically insert **DIST** instead. **Further information:** "Tilting the working plane with PLANE functions (#8 / #1-01-1)", Page

3.5 Files

Topic	Description
File management	The control also displays the most recently selected 3D models of the file types ***.stl** and ***.cfg** in the **Last files** area.
	When the recycle bin is full, the control will display a confirmation prompt. If you still delete a file, the control will permanently delete this file. You cannot undo this action. **Further information:** "File management areas", Page

3.6 Collision monitoring (#140 / #5-03-2)

Topic	Description
Set up fixtures	For the selection of the 3D model, the **Last files** area has been added. The control displays the most recently selected 3D models of the file types ***.stl** and ***.cfg**. **Further information:** "Integrating fixtures into collision monitoring (#140 / #5-03-2)", Page

3.7 Multiple-axis machining

Topic	Description
FUNCTION POLARKIN polar kinematics	The control permits execution of the **POLARKIN** NC function only in **FUNCTION MODE MILL** milling mode. **Further information:** "Machining with polar kinematics with POLARKIN", Page

3.8 Touch probe functions in the Manual operating mode (#17 / #1-05-1)

Topic	Description
Set up the workpiece (#159 / #1-07-1)	For the selection of the 3D model, the **Last files** area has been added. The control displays the most recently selected 3D models of the file types ***.stl** and ***.cfg**. **Further information:** "Setting up the workpiece with graphical support (#159 / #1-07-1)", Page

3.9 Pallet machining and job lists

Topic	Description
The **Job list** workspace	During the program run, you can move the rows of the job list to change the execution sequence. However, you cannot manipulate the current machining operation by, for example, moving the row currently being executed or inserting a row before the row currently being executed. If the row you have moved has already been executed, you have to reset the status of this row. **Further information:** "Zeilen in der Palettentabelle verschieben", Page

3.10 Program run

Topic	Description
Buttons	The buttons in the function bar of the **Program Run** operating mode will always be displayed, even when no NC program is selected.

3.11 Tables

Topic	Description
The **Form** workspace	When you select the **Configure the layout** icon, the control displays all areas of the form. By default, the control shows only the areas that are relevant to the current tool type. **Further information:** "The Form workspace for tables", Page
Tool management	When you open the selection window for the **KINEMATIC** parameter, you can directly enter characters to search for a tool carrier kinematic model.

3.12 Electronic handwheel

Topic	Description
The **Handwheel** toggle switch	The position of the **Handwheel** toggle switch has been changed in the function bar. The control will display the **Handwheel** toggle switch on the right side of the function bar, next to the **Internal stop** button. **Further information:** "Icons and buttons", Page **Further information:** "Electronic handwheel", Page

3.13 The Settings application

Topic	Description
Network drives	You can use the **Single Sign On** setting not only for private networks, but also for all networks. The control uses the respective user's logon data for the public network drive. **Further information:** "Network drives on the control", Page
OPC UA connection assistant (#56-61 / #3-02-1*)	The **OPC UA connection assistant** also exports self-generated server certificates. **Further information:** "The OPC UA connection assistant function (#56-61 / #3-02-1*)", Page
The **DNC** menu item	If the **DNC access permitted** toggle switch is inactive, the **TNCopt full access allowed** toggle switch is dimmed instead of hidden. **Further information:** "The DNC menu item", Page
Configurations	If you reset or save a configuration, the control displays a confirmation prompt. If you reset to a saved configuration, the control will display the date of saving. **Further information:** "Configuring the control's user interface", Page

3.14 HEROS operating system

Topic	Description
NC/PLC Backup and **NC/PLC Restore**	You can create and restore backups of more than 4 GB in file size.

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