

## Hard- und Software Burkhard Lewetz

**Technical Software Engineering** 

# How does it work... ... with *WinPC-NC*?

Define special protected areas and have them monitored

Light USB ✓ Professional



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Starting with version V4.1, *WinPC-NC Professional* can monitor up to three areas against unintentional overrun and prevent driving into them. This makes it easy to mark fixtures, vices or tool magazines, for example, and to avoid collisions with them.

### Table of contents

| Requirements                             | 2 |
|--|---|
| Definition and activation                | 2 |
| Switching on/off the monitoring          | 3 |
| Behaviour when entering a protected area | 4 |

#### Requirements

The function for defining protected areas is only possible and available in *WinPC-NC Professional* from version 4.1 and only with used firmware from 1.62/00R on the axis controller *CNCCON* or the *CNCMAX* control.

### Definition and activation

The definition is made in the parameters under Basic settings - Monitoring.

Each range has a min. and max. value for the XYZ axes and when all three axes cross the limits and stay within the range at the same time, a movement stop and an error message is generated. With a check in the checkbox the monitoring of this range is activated.

As a default value, all limits are zero and thus the range cannot be crossed or the axis cannot stay within the limits.



Define special protected areas and have them monitored

| Ports X-Axis Y-Axis Z-Axis   |              |              |           | Equipment Dimension<br>Monitoring |             | s Homing | Jog          | Signal Wizar     | d Spind |
|------------------------------|--------------|--------------|-----------|-----------------------------------|-------------|----------|--------------|------------------|---------|
| 24.00                        | speeu        | control      |           |                                   | loniconing  |          | U            | spiay/operatio   |         |
| Input sig                    | Inals        |              |           | Critical Areas                    |             |          |              |                  |         |
| Wait for Signal START (edge) |              |              |           | Area 1 active                     |             | X        | Y<br>+_53.14 | Z<br>+_90.14     | mm      |
|                              |              |              |           |                                   |             | +_153.00 |              |                  |         |
| Auto-repeat                  |              |              |           |                                   | to          | +_199.30 | +64.30       | +_100.00         | mm      |
| 🗐 Initi                      | ator - Z dov | wn           |           |                                   |             |          | As-          |                  |         |
| Initiator - Z up             |              |              | Area 2 ac | tive                              | х           | Y        | Z            |                  |         |
| Initiator - molette fixed    |              |              | Area      | Area 2 from                       | +0.00       | +0.00    | +0.00        | mm               |         |
|                              |              |              |           | to                                | +0.00       | +0.00    | +0.00        | mm               |         |
| Switch - Horning             |              |              |           |                                   |             |          |              |                  |         |
|                              |              |              |           | Area 3 ac                         | tive        | X        | Y            | Z                |         |
|                              |              |              |           |                                   | Area 3 from | +0.00    | +0.00        | +0.00            | mm      |
|                              |              |              |           |                                   | to          | +0.00    | +0.00        | +0.00            | mm      |
| Pas                          | sword for p  | arameters ar | d editor  |                                   |             |          | Passwordv    | alidation time ( | min) _0 |
|                              |              |              |           |                                   |             |          |              |                  |         |

#### Switching on/off the monitoring

In normal view, a new button with a signal horn appears in the speed buttons bar and is used to easily switch monitoring on/off.



In the touch view, the new button is located at the bottom of the screen.

The button in red shows the deactivated monitoring and this is always necessary if the machine was accidentally moved into an area and now has to be moved out again manually. It is then necessary to deactivate the monitoring, then leave the protected area with the machine and then the monitoring should be reactivated.

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#### Attention !

For safety reasons, monitoring is automatically activated at job start and after a reference run.

#### Behavior when overrunning a protected area

If one of the active areas is accidentally crossed, the movement is stopped and *WinPC-NC* displays an error message. In order to move to a safe area again, the monitoring must first be switched off by clicking on the button and then moved out of the violated area using the functions in manual jogging. To be on the safe side, the monitoring should be reactivated immediately afterwards.

