

TOUCH *Endurance Test*

Document Rev0

Operating Guide for the
Touch Endurance Test

LOGIC
office

Nonstop Hand Switching
for Internal Tests



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This operating guide is only applicable to the nonstop functionality of the TOUCH hand switch!
 For information concerning the standard hand switch, please refer to the user manual TOUCHdown on our home page. The following [Link](#) takes you to it.

1 Touch – Endurance Test

1.1 Description

The Touch-Endurance Test hand switch is intended for internal testing.

It has two modes of operation. The first mode is the normal mode, in which the hand switch can be used as a standard hand switch.

The second mode is the automatic mode, in which the hand switch can be used as a nonstop hand switch.

2 Mode of Operation

2.1 Display Overview



2.2 Show Menu

Press the button combination: memory position button 1  + memory position button 4  + Table downwards  on the hand switch. (and then hold them down for five seconds) A menu appears on the display.

The menu choices are: Edit , Off , or Play .

Use the buttons Table upwards  and Table downwards  to navigate around the menu. Make a selection by pressing the memory button .

2.3 Description of the Menu Functions

There are three options in the main menu:

→ **Off** 

Choose 'Off' in order to use the standard hand switch and turn off its nonstop mode.

→ **Edit** 

Choose this menu item in order to create a new endurance test command sequence or edit an existing one.

→ **Play** 

Choose 'Play' to start a previously selected command sequence. This function is only available if a sequence was already created. When you use the nonstop hand switch for the first time, this selection is not available.

2.4 Creating an Automatic Sequence

Select the main menu command 'Edit' . A succession of commands can be programmed in the follow way.

→ Select the required command for the sequence. The first two digits on the display indicate the step number of the command in the sequence and the last two digits represent the command itself. The following commands are possible:

- **U1** , **U2**  -> Upwards movement motor group 1(U1) or motor group 2 (U2)

- **d1** , **d2**  -> Downwards movement motor group 1(U1) or motor group 2 (U2)

- **S1 – S4** -> Movement to a saved position 1 to 4

, , , 



Note: S5 and S6 do not have any function , 

- **P**  -> Pause. Simulate a pause within the nonstop program in order to adhere to duty cycles.

- **JP**  -> Jump. Jump to a particular command defined in your sequence. Always select 'Jump' for the last step of a sequence.

→ Specify how long the command should be executed in seconds. With the Table upwards  and Table downwards  buttons, you can change each segment in the display from 0 to 9.

To select a particular segment, use memory position button 1  and memory position button 2

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- ➔ Once you have entered the entire sequence, choose the 'Jump'  command. This finishes the sequence.
- ➔ Within the 'Jump' command, specify to which sequence step control should be transferred. This allows you to perform initialization steps at the beginning of a sequence, which are only carried out at the outset and not as part of the endurance test. After this Jump command, you are returned to the main menu and your command sequence is saved in the EEPROM of the hand switch's microcontroller.

2.5 Example Sequence

Step 1:

Bring up the menu by pressing the button combination: memory position button 1  + memory position button 4  + Table downwards  on the hand switch (hold them down for five seconds). A menu appears on the display.

The choices are: Off , Edit  and Play .

Step 2:

Press the button Table upwards  or Table downwards  until Edit  appears on the display.

Step 3:

Confirm the edit menu selection by pressing the memory button .

Now you can generate your desired sequence as shown in the following example. Possible commands and their explanations can be found in Section 2.4 Creating an Automatic Sequence.

Step 4:

U1 appears on the display.

Select the required command using Table upwards  or Table downwards .



Command 0: Upwards movement motor group 1

Step 5:

Press the memory button  in order to confirm the selected command. Flashing digits (time in seconds) are shown on the display.

Step 6:

Now you can choose the desired time period for which the command should be executed.

Each digit can be changed from zero to nine by using the Table upwards  or Table downwards  buttons. To move the cursor on the display, you can use the memory position button 1  for left and the memory position button 2  for right.

Step 7:

Confirm your desired time period by pressing the memory button 
 In our case, we have chosen 20 seconds for the upwards movement.



Execution time of the command is 20 seconds

Step 8:

Select the required command using Table upwards  or Table downwards .



Command 1: Downwards movement motor group 1

Step 9:

Press the memory button  in order to confirm the selected command.
 Flashing digits (time in seconds) are shown on the display.

Step 10:

Now you can choose the desired time period for which the command should be executed.

Each digit can be changed from zero to nine by using the Table upwards  or Table downwards  buttons. To move the cursor on the display, you can use the memory position button 1  for left and the memory position button 2  for right.

Step 11:

Confirm your desired time period by pressing the memory button 
 In our case, we have chosen 20 seconds for the downwards movement.



Execution time of the command is 20 seconds

Step 12:

Select the required command using Table upwards  or Table downwards .



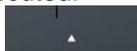
Command 2: Upwards movement motor group 1

Step 13:

Press the memory button  in order to confirm the selected command.
 Flashing digits (time in seconds) are shown on the display.

Step 14:

Now you can choose the desired time period for which the command should be executed.

Each digit can be changed from zero to nine by using the Table upwards  or Table downwards  buttons. To move the cursor on the display, you can use the memory position button 1  for left and the memory position button 2  for right.

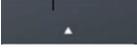
Step 15:

Confirm your desired time period by pressing the memory button 
 In our case, we have chosen 9 seconds for the upwards movement.



Execution time of the command is 9 seconds

Step 16:

Select the required command using Table upwards  or Table downwards .



Command 3: Downwards movement motor group 1

Step 17:

Press the memory button  in order to confirm the selected command.
 Flashing digits (time in seconds) are shown on the display.

Step 18:

Now you can choose the desired time period for which the command should be executed.

Each digit can be changed from zero to nine by using the Table upwards  or Table downwards  buttons. To move the cursor on the display, you can use the memory position button 1  for left and the memory position button 2  for right.

Step 19:

Confirm your desired time period by pressing the memory button 
 In our case, we have chosen 9 seconds for the downwards movement.



Execution time of the command is 9 seconds

Step 20:

Select the required command using Table upwards  or Table downwards .

In this example, we select the pause command.



Command 4: Pause

Step 21:

Press the memory button  in order to confirm the selected command.
 Flashing digits (time in seconds) are shown on the display.

Step 22:

Now you can choose the desired time period for which the command should be executed.

Each digit can be changed from zero to nine by using the Table upwards  or Table downwards  buttons. To move the cursor on the display, you can use the memory position button 1  for left and the memory position button 2  for right.

Step 23:

Confirm your desired time period by pressing the memory button . In our case, we have chosen a pause period of 522 seconds.



Duration of the pause is 522 seconds

Step 24:

Select the required command using Table upwards  or Table downwards . In this example, we select the Jump command, in doing so the sequence is completed.



Command 5: Jump, end of command sequence

Step 25:

Press the memory button  in order to confirm the selected command. A command number is shown in flashing digits on the display.

Now you can select the particular command to which you would like to jump.

Each digit can be changed from zero up to the number of commands which you have defined by using the Table upwards  or Table downwards  buttons.

Step 26:

Confirm your desired command by pressing the memory button .

In our case, we have chosen command 0, therefore the sequence will start at command 0 every time.



Jump to step 0

Step 27:

Play  appears on the display of your hand switch.

Confirm this command by pressing the memory button , your command sequence is started.

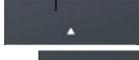
2.6 Usage of Automatic Sequences

In order to start the automatic sequence, select Play  in the main menu. The hand switch begins to execute the command sequence which was programmed in the edit menu. By lightly touching one of the four memory position buttons you can read information about the execution on the hand switch's display.



Note: Please note that this information is only available during execution of the command sequence. All information is deleted when the test is stopped by pressing 'Off'.

Reading the hand switch, the following information is available:

- Memory position button 1 : The number of completed cycles (how often the command sequence was executed)
- Memory position button 2 : Time in seconds until the next command is carried out
- Memory position button 3 : The command which is currently being executed
- Memory position button 4 : Time in minutes since the nonstop test was started.
- Table upwards : current height of your system.
- Table downwards : current height of your system.

To stop the automatic sequence and open the main menu, press the following button combination

together (Memo1  + Memo4  + downwards button ). The command sequence is

stopped immediately. Now you can select 'Off' in the main menu  and the hand switch's mode is set to 'normal'.



Note: Even if the mains voltage is disconnected during an automatic sequence, it is restarted at command zero when the mains voltage is restored.



Attention: In the event that a pause is too short and the control's required duty cycle setting is exceeded, the error notification 'HOT' is not shown on the display during the nonstop mode. The hand switch continues to execute its command sequence regardless of whether or not the control box is actually operating the drives. Hence, the cycle count in the hand switch is increased, even when no movement has taken place. For this reason, it is important that the pause period is set accordingly so that the test results are not falsified.

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