

# TopTip

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## *Miniwrite/x*

Microprocessor controlled  
writing test machine

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# Miniwrite/x

## Microprocessor controlled Writing test machine

Thank you very much for purchasing this machine which will give you the possibility to check the quality of your refills and tips in an absolutely objective and repeatable way thanks to its latest generation microprocessor and dual line LCD display.

The built in microprocessor allows you to get the highest possible precision and at the same time to simplify most operations giving you at any time exact informations on the state of the test.

### OPERATION MANUAL

#### Machine installation

Open the wooden transportation box and place the machine on your working table. The machine is delivered with a paper roll already in working position.

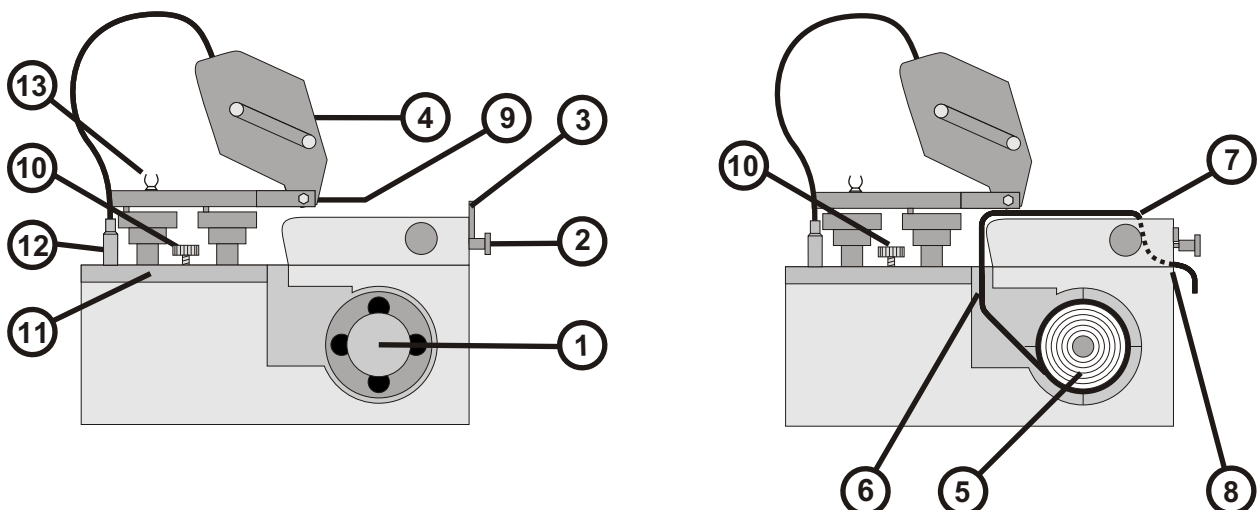
If you wish to insert a new roll, unscrew the cap ① on the left side. Extract the empty tube. Unscrew the screw ① and rise the whole upper set ①. Insert the paper roll on the left side ⑤. Pull the 2 buttons ② on the front and lock them on this position with the 2 blocks ③. Take care that the paper should follow the line shown on the sketch ⑥ till point ⑦. There you should insert carefully the paper sheet into the slot till comes out of it ⑧. Pull the paper for about 10 cm and at the same time check that it is well aligned and flattened. Now you can unlock the 2 buttons ② by turning the 2 blocks ③. Lower the upper set ① and refix the screw ①.

Lock the paper roll screwing the cover ① back on the bar holding the roll.

Check that special round plug ① is inserted in the socket on the upper set (for testing refills with oil based ink)

#### Writing angle

The writing angle may be changed rotating the main block through the 2 screws ⑨. Tighten these screws again after you positioned the block with the refill holders ④ at the wanted writing angle.



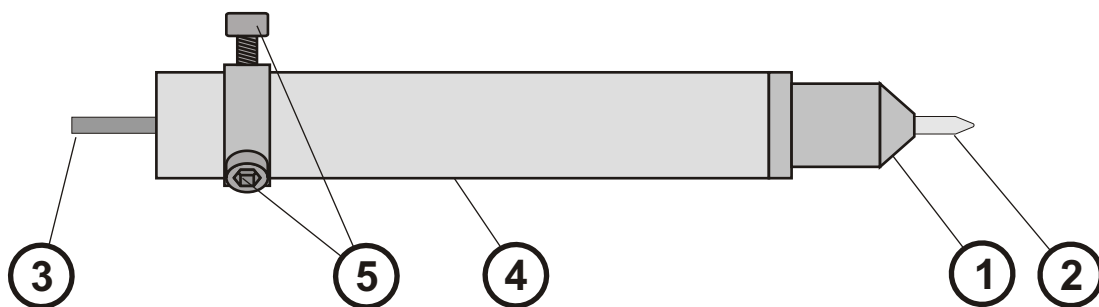
## Refill mounting

Your refill tubes should be at least 12 cm long.

There are 2 different refill holder, depending on the option you have chosen.

### Standard holder (N)

This holder is adapted only for the refill type defined at order.



Take the refill holder ④ and release the 3 screws ⑤. Insert a refill ③ into the holder till the tip ② exits from the hole ①.

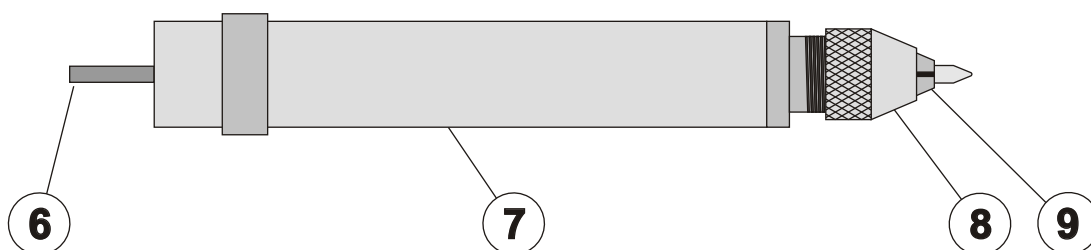
Tighten the 3 screws ⑤ till the refill will stay centered and firmly positioned.

Repeat this operation for all 9 remaining refill holders and insert them in the test machine.

In order to extract the refill at the end of the test, just release one of the screws ⑤ and extract the refill ③.

### Special holder (S1)

This holder accepts all tips with a front diameter ranging from 1.5 to 2.5 mm

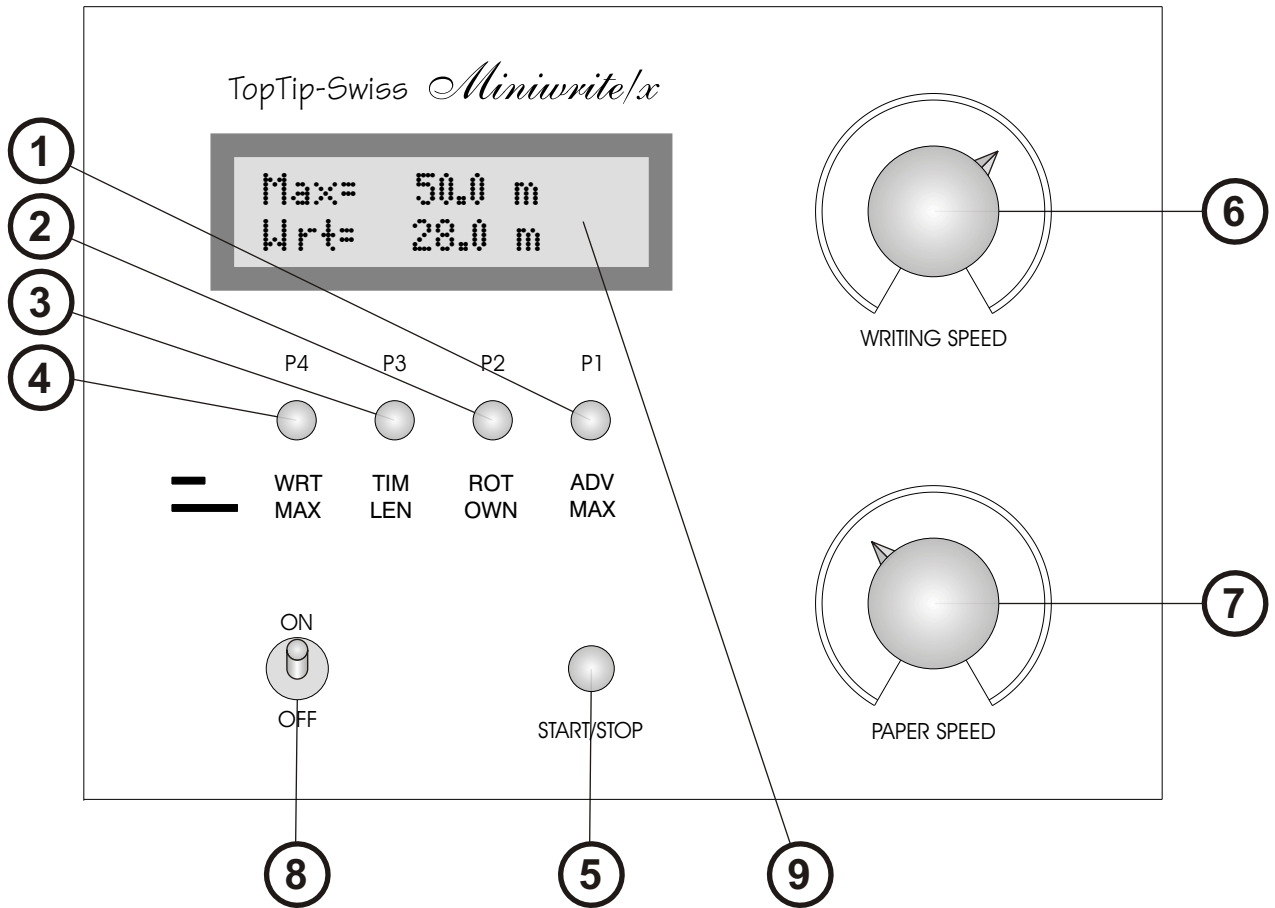


Take the refill holder ⑦ and unscrew front bolt ⑧. Insert a refill ⑥ into the holder till the tip exits from the pincers ⑨.

Tighten the bolt ⑧ till the refill will stay automatically centered and firmly positioned.

Repeat this operation for all 9 remaining refill holders.

In order to extract the refill at the end of the test, just unscrew front bolt ⑧ and extract the refill ⑥



## Control panel

Description of available commands (**S**): short pressure, (**L**): long pressure):

- ① **S**: read advancement speed      **L**: high speed paper advancement command
- ② **S**: read writing speed              **L**: Owner
- ③ **S**: read length of total test time    **L**: Paper length calculation
- ④ **S**: read writing length                **L**: max writing length programming
- ⑤ **S**: start/pause                        **L**: stop
- ⑥ writing speed regulator (8 steps)
- ⑦ paper advancement regulator (8 steps)
- ⑧ mains ON/OFF switch
- ⑨ 2 line multipurpose LCD display

## Operating procedure

### Start

Check that the power plug is connected to the power supply line (the voltage must be 220V unless a label on the rear side of the regulator states a different voltage). Turn mains switch ⑧ on.

The special 2 line LCD display ⑨ will show some text. The text may appear differently on your machine, according to individual settings which may be requested on order. The numbers shown in the following pictures will also probably be different from the ones on your machine and are shown here for your reference only.



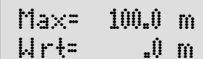
```
MINIWRITE-TopTip
for ACME INC
```

Pressing at any time push button ② for over 1 second will show the same display.

### Maximum writing length setup

Before starting operation it is necessary to check if maximum writing length (in meters) on the first line of LCD corresponds to the wanted one.

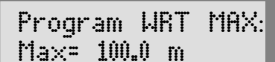
Press push-button ④ (WRT)



```
Max= 100.0 m
Wrt= .0 m
```

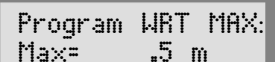
Read the number in the first line (e.g.: MAX=100.0), which corresponds to the maximum writing length in meters. When this writing length is reached, the machine will automatically stop the test.

If the number on the display doesn't correspond to your wanted one, following procedure must be followed:

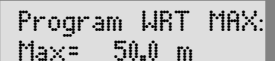


```
Program WRT MAX:
Max= 100.0 m
```

- a) press for about 1 sec. push-button ①. You will hear 2 short beeps and the display will show the text "Program WRT MAX". On the second line you see again the programmed max writing length (in meters).
- b) pressing any of following push-buttons increases the corresponding digit by 1:
  - push-button ①: changes length unity in meter from 1 to 9. Thereafter you get the minimum value of 0.5 (only if all other digits are set to 0) or 0 (if any other digit differs from 0) and then changes from 1 to 9 again.
  - push-buttons ②, ③, ④ change the corresponding digit from 0 to 9 and then 0 again.
- c) if you change your mind and want to keep the old value, turn somewhat one of the 2 regulators ⑥ or ⑦. On LCD appears the text "Not programmed" for about 2 seconds.
- d) if you got the wanted maximum length, press STOP ⑤. On LCD appears the text "PROGRAMMED!" for about 2 seconds.



```
Program WRT MAX:
Max= .5 m
```



```
Program WRT MAX:
Max= 50.0 m
```



```
Not programmed
```



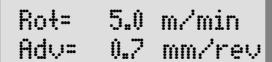
```
PROGRAMMED!
```

NOTE: this procedure must absolutely be ended either with operation c) or d) or by switching off the machine.

**NOTE: once a new maximum length has been successfully programmed, this value will be remembered by the machine even if it will be switched off.**

## Writing speed

Turn the writing speed regulator ⑥ till you get the wanted speed in meter per minute as shown on the first line of LCD (ROT).

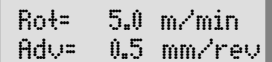


```
Rot= 5.0 m/min
Adv= 0.7 mm/rev
```

You can get the same information at any time pressing the ROT push-button ② without affecting the current operation.

## Paper advancement

Turn the paper advancement regulator ⑦ till you get the wanted distance in mm between one circle and the next one as shown on the LCD (ADV).



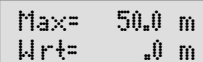
```
Rot= 5.0 m/min
Adv= 0.5 mm/rev
```

If you change the writing speed with the regulator ⑥ the paper advancement speed will automatically change in order to get always the same distance between one circle and the next one.

You can get the same information at any time pressing the ADV push-button ① without affecting the current operation.

## Start writing test

After having set the maximum writing length, the writing speed and the paper advancement, you can start the test pressing the START push-button ⑤. Immediately the motors will start turning and on the display you will see the length in meter the refills have written. This value (WRT) is continuously updated in real time.



```
Max= 50.0 m
Wrt= .0 m
```

On the first line you will see the maximum writing length (MAX).

During the test you are allowed to change the writing speed and the paper advancement. You may even change the maximum writing length, although in this case the machine will stop till you end this operation as previously explained.

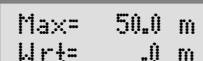
## Automatic stop

When the refills have written for the whole number of meters as defined by the MAX value, the machine will automatically stop the test. The paper will be automatically advanced in order to separate 2 following tests. The internal speaker will send beeps for one minute. Shortly pressing any push-button ①, ②, ③ or ④ the speaker will be silenced.



```
End= 50.0 m
Test completed!
```

Pressing the STOP/RESTART push-button ⑤ again the test will restart from beginning again. The WRT value will be reset to 0.0 m. The display may be different as it depends on which button has been pressed previously.



```
Max= 50.0 m
Wrt= .0 m
```

## Pause and continue

During a test you may activate at any time a momentary stop by shortly pressing the STOP/RESTART push-button ⑤.



```
Pause
Wrt= 28.0 m
```


Shortly pressing the STOP/RESTART push-button ⑤ again the test will continue at the same point as when it had been stopped restoring the previous speed and writing length.



```
Max= 50.0 m
Wrt= 28.0 m
```

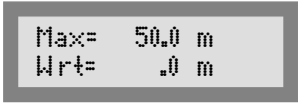
## Stop and restart a new test

During a test you may activate at any time a final stop by pressing the STOP/ RESTART push-button ⑤ for more than 1 second till you hear 2 short beeps. All the motors will stop turning.



Test stopped !


Pressing the STOP/RESTART push-button ⑤ again the test will restart from beginning again and all motors will start turning. The WRT value will be reset to 0.



Max= 50.0 m  
Wrt= .0 m

## High speed paper advancement

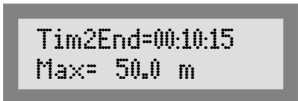
If you press the ADV MAX push-button ① for more than 1 second till you hear 2 beeps, the paper will be advanced at a high speed till you leave the push-button. All the other motors will stop turning. This may be used for optical separation of various tests or to extract the paper in order to cut it off.



Adv=MAX

## Test Time calculation

If you press at anytime during the test the TIM push-button ③ the display will show the time needed to complete the test at the actual speed and maximum writing length.



Tim2End=00:10:15  
Max= 50.0 m

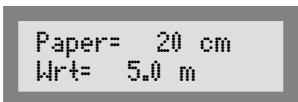
The calculation is shown in hours, minutes and seconds till a maximum of about 18 hours. If the test should be longer than this value the display will show 99:99:99. If the machine is not able to compute the time, the display will show HH:MM:SS or nothing.

If you change at any time the writing speed or the maximum writing length, the test time will be immediately recalculated (press TIM push-button ③ again).

Pressing the TIM push-button ③ will not modify the current status of the test.

## Paper length calculation

If you press at any time the TIM push-button ③ for more than 1 second till you hear 2 short beeps the display will show how much paper you will need for the test at the actual paper advancement and maximum writing length settings. This measurement (in centimeter) is updated in real time while the test proceeds. If the needed paper length exceeds 100 m the display will show >9999



Paper= 20 cm  
Wrt= 5.0 m

## Switch off

**Before switching off the machine you must stop all motors.**

Turn mains switch ⑧ down.

## Standard abbreviations used in display

WRT	:written length (in meter. Updated at every revolution)
MAX	:maximum writing length (in meter. Programmable)
ROT	:rotation speed (in m/min)
ADV	:paper advancement per revolution (in mm/revolution)
TIM2END	:remaining time till end of test (in hours:minutes:seconds) (read: time to end)
PAPER	:paper length needed for test (in cm)

## Servicing

No part of the electronic regulator needs special servicing. Just keep it clean with a lint-free, anti-static, dry cloth.

Do not use any cleaning agent containing carbon, petroleum, alcohol, water or similar components. Do not use sharp-edged tools, screw drivers, metal brushes or similar for cleaning. Guarantee expires if the control box is opened or if the machine has been damaged in any way.

## Technical characteristics

Power Supply Voltage:	220V ±10% - 50/60 Hz
Fuse	0.25A, 250V
Temperature:	15° - 45°C (operating) 0° - 50°C (storage)
Air humidity:	max 90%, non-condensing
Paper advancement	0.1 - 2 mm/rev (8 preprogrammed steps) standard: 0.1, 0.2, 0.3, 0.4, 0.5, 0.7, 1.0, 2.0
Writing speed	2.0 - 9.0 m/min (8 preprogrammed steps) standard: 2.0, 3.0, 4.0, 5.0, 6.0, 7.0, 8.0, 9.0
Writing angle	0-30°

## Options

Following options are available at order without additional charges:

- a) Text on LCD during switch on (2 lines of 16 characters each)
- b) Texts and abbreviations on LCD (translations in other languages)
- c) steps for paper advancement (8 steps between 0.1 and 2.0 mm/rev)
- d) steps for writing speed (8 steps between 2.0 and 9.0 m/min)

Following options are available with additional charges:

- a) Power supply of 110V (available at order only)
- b) Special refill holders (S1) with automatic centering of refill (10 pcs)
- c) Special holders for assembled pens or special refills (if technically feasible)
- d) Writing speed and advancement speed (if technically feasible)

## Support

For any question or enquiry you may contact:

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