

# SUB-MICRON INTELLIGENT COMPUTERIZED MICROMETER HEAD

## USER MANUAL





Item No	Range	Resolution	Accuracy	Data output	Data output	
	mm	mm	mm		USB	Wireless
110181027	0-25	0,0001	$\pm 0,002$	Error & Temp comp. Preset. Memory Max/Min Limits	+	+

Parameters	
LED display	color 1,5 inch
Power supply	Rechargeable Li-Pol battery
Lifetime	>80h (Medium brightness)
Charging port	micro-USB
Case material	Aluminium
Buttons	Switch, Reset
Wireless data transfer	10m without external antenna 50m with external antenna (from set)



#### PRECISION MEASUREMENTS

MICROTECH computerized micrometer with 0.1 resolution can be used for high precisor measurements in manufacturing, automotive medical industry and for calibration



#### COLOR GO/NOGO INDICATION

Easy and quick limits control.  
It's possible setup max and min value throw menu.  
Color indication reduce possibility of error during control



#### INTERNAL MEMORY

Computerized micrometer has memory manger with possibility saving data to folders. Separate Data's or Folders can be transfer Wireless to MICROTECH Software (Windows, Android,iOS)



#### FORMULA MODE

In Formula mode we use  $Ax^2+Bx+C$

Main using of this function is:

- Preset function
- Magnification of measured value

For customers request Formula can be updated



#### ERROR COMPENSATION

It's possible to make mathematical error compensation. Just re-calibrate micrometer with gauge block set and save results. Micrometer will indicate measuring results include re-calibration.



#### TEMPERATURE COMPENSATION

Temperature compensation function gives possibility recalculate details sizes with high or low temperatures to normal (20C conditions). Available recalculation for 7 materials

**SWITCH ON DEVICE** - button push (1 sec)

**SWITCH OFF DEVICE** - auto switch off (configuring throw DISPLAY SETTING menu)

- button push (3 sec)



Clean the oil from the measuring surfaces of micrometer by cloth.

Turn on micrometer by pressing SWITCH ON button.

Check the setting display to zero. Contact with each other (or with setting gauge) measuring surfaces of the anvil and the spindle, using the ratchet and take a measurement.

Rotation the micrometer screw in the direction of convergence measuring surfaces using the ratchet.

For zero setting, press the ZERO button on Touchscreen.

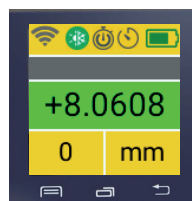
## CHARGING

For charging connect USB cable



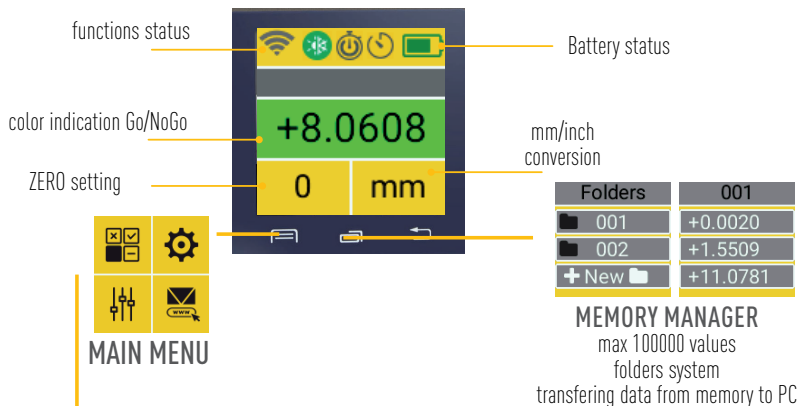
**BUILT-IN BATTERY** - rechargeable Li-Pol battery

Charging process indicating  
on Battery status  
(switch on device)



## VIDEO INSTRUCTION



**LIMITS**

color Go/NoGo

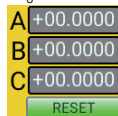
Max/Min

Enable

MAX

**MAX/MIN**

indicating max or min value

**FORMULA MODE** $Ax^2+Bx+C$ 

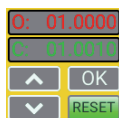
Timer

+000 sec.

RESET

**TIMER MODE**

saving or transfer data on timer

**ERROR COMPENSATION**

mathematical correction

Temp. comp.

None Mode

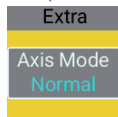
+25.00 C

**TEMPERATURE COMPENSATION**

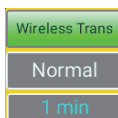
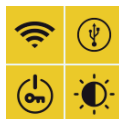
manual correction 4 materials

**RESOLUTION**

selected up to 0.0001mm

**AXIS MODE**

normal or inverted

**WIRELESS**

modes of data transmission

Mode OFF

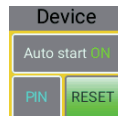
UART OFF

Keypad ON

CONFG

**USB**

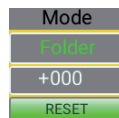
USB connection configuration

**DEVICE SETTING**

autostart, reset, password

**SCREEN SETTING**

screen rotation, brightness

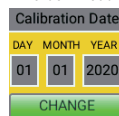
**MEMORY SETTING**

folder configuration

Link to software

**SOFTWARE**

link to download app

**CALIBRATION STATUS**

calibration date control

**DEVICE INFO**

service info about device



USB CONNECTION



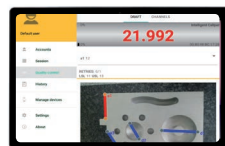
USB-DONGLE



WIRELESS CONNECTION



IMPORT FROM FILE OR CAMERA



Windows



iOS



ANDROID

DOWNLOAD



DOWNLOAD



DOWNLOAD



SAVING DATA  
TO XLS. CSV  
FORMATS



SAVING DATA  
TO XLS. CSV  
FORMATS



SAVING DATA  
TO XLS. CSV  
FORMATS



TRANSFER DATA TO  
CAD, SPC OR OTHER  
SOFTWARE



SAVING  
GRAPH



SAVING  
GRAPH



TRANSFER DATA TO  
EXCEL OR OTHER  
TABLE EDITORS



VOICE  
MODE



VOICE  
MODE

## DATA TRANSFER DISTANCE FOR INTELLIGENT INSTRUMENTS

- All MICROTECH Intelligent instruments has internal memory. You can collect data to memory and when it will be necessary transfer all data to the peripheral device with no data losing.
- It's possible transfer data, like in Wireless instruments up to 15 m or up 50 m with external antenna
- USB port can be used to transfer data directly to Windows PC



QUALITY  
CONTROL  
RESULTS



**MICROTECH**

# FUNCTIONS

## LIMITS GO/NOGO

### MENU SETTING

+00.0001

> +00.0001

MIN

### MAIN SCREEN

+8.0608

0 mm

NoGo Go NoGo

MAX - NoGo over MAX value  
 MIN - NoGo over MIN value  
 RANGE - selecting GO range  
 NONE - No active mode

## MAX/MIN

### Max/Min

Enable

MAX

### Status indication on main screen

+8.0608

0 mm

ENABLE/DISABLE mode indicating MAX dvalue indicating MIN value

## FORMULA

A +00.0000

B +00.0000

C +00.0000

RESET

### EXAMPLES:

- for value x2 - B=2
- set PRESET 100mm C=100
- square value A=1

Aavailable Formulas:  
 - $Ax^2+Bx+C$   
 -Radius (for indicators)  
 -Sphere (for indicators)

## TIMER

### Timer

+000 sec.

RESET

### Timer indication on main screen

+8.0608

0 mm

Saving or transfer data by Timer  
 Select timer period  
 For disactive - reset to zero

## MATH. ERROR COMPENSATION

0. 01.0000

0. 01.0000

OK

RESET

### Red value

- actual value on instrument

### Green value

- compensated value

Use up&down button to update actual value (green) to correct value.  
 For compensation correction - push OK.  
 After points correction computerized instrument will recalculate values according corrected points

## TEMPERATURE COMPENSATION

### Temp. comp.

Glass, Quartz

Solid alloys, Mo

+25.00 C

RECYCLE

+8.0608

0 mm

Re-calculation value for calibration conditions 20C  
 7 types of materials for selection  
 Manual temperature setting

## RESOLUTION

### Resolution

X.0000

+8.0608

Selecting instrument resolution

## EXTRA (Axis mode)

### Extra

Axis Mode

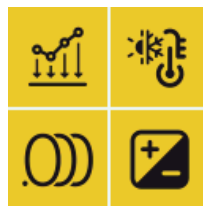
Normal

### +/- value indication

+8.0608

0 mm

Selecting normal or inverted axis mode



# FUNCTIONS



MICROTECH

**WIRELESS CONNECTION**

Wireless Trans

Normal

1 min

WIRELESS status

+8.0608

0 mm

**USB CONNECTION**

Mode OFF

UART OFF

Keypad ON

CONFIG

**PIN**

Device

Auto start ON

PIN RESET



**DISPLAY SETTING**

Angle 0

Sleep off

Rotation 0, 90, 180, 270

Sleep mode

Brightness level

+8.0608

0 mm

8090'8+

**MEMORY MANAGER SETTINGS**

Mode

001

Folder

+0.0020

+000

+1.5509

RESET

+11.0781

- Standard / Folder mode

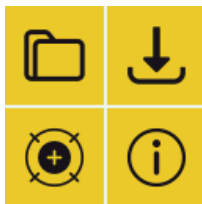
In Folder mode possible to set qty values in each folder.

**LINK TO SOFTWARE**

Link to software

Link to page with MDS Software download

- for Android, iOS, Windows
- Free and Pro versions



**CALIBRATION DATE**

Calibration Date

DAY MONTH YEAR

01 01 2020

CHANGE

Saving or transfer data by Timer

Select timer period

For disactive - reset to zero

**DEVICE INFO**

app@microtech.ua

F411RE

FW: 1.1.1

MAC: 00000

ID: 00000000

Information about firmware version and MAC adress for easy connection



**MICROTECH**



0.1  $\mu$ m



**MICROTECH**

innovative measuring instruments

61001, Kharkiv, Ukraine, str. Rustaveli, 39

tel.: +38 (057) 739-03-50

[www.microtech.ua](http://www.microtech.ua)

[tool@microtech.ua](mailto:tool@microtech.ua)

Change without prior notice

Edition: M1030\_0520