



MICROTECH



WIRELESS TO MDS APP  
WIRELESS HID+MAC  
USB HID



WIRELESS TO MDS APP  
WIRELESS HID+MAC  
USB HID



# COMPUTERIZED HEIGHT GAUGE

## USER MANUAL



ISO17025:2017

ISO 9001  
BUREAU VERITAS  
Certification



ISO 9001:2015

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



**MICROTECH**

# SPECIFICATION

## TABLET HEIGHT GAUGE

| Item No   | Range  |       | Resol. | Accur. | 2D connect<br>Measuring HUB | Graphic | Analog scale | Preset | Go/NoGo | Max/Min | Formula | Timer | Temp comp | Linear corr | Calibr date | Recharge | Memory | WIRELESS | USB    |
|-----------|--------|-------|--------|--------|-----------------------------|---------|--------------|--------|---------|---------|---------|-------|-----------|-------------|-------------|----------|--------|----------|--------|
|           | mm     | inch  | mm     | µm     |                             |         |              |        |         |         |         |       |           |             |             |          |        |          |        |
| 144303260 | 0-300  | 0-12" | 0,001  | ±20    | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •      |
| 144305260 | 0-500  | 0-20" |        | ±30    | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | val    | HID      | Update |
| 144310260 | 0-1000 | 0-40" |        | ±50    | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | 2000   | range /  | Update |
| 144315260 | 0-1500 | 0-60" | 0,01   | ±60    | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •      |
| 144320260 | 0-2000 | 0-80" |        | ±80    | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •      |

## TABLET E-FORCE HEIGHT GAUGE

| Item No   | Range  |       | Resol. | Accur. | eForce<br>control | 2D connect<br>Measuring HUB | Graphic | Analog scale | Preset | Go/NoGo | Max/Min | Formula | Timer | Temp comp | Linear corr | Calibr date | Recharge | Memory | WIRELESS | USB |
|-----------|--------|-------|--------|--------|-------------------|-----------------------------|---------|--------------|--------|---------|---------|---------|-------|-----------|-------------|-------------|----------|--------|----------|-----|
|           | mm     | inch  | mm     | µm     | N                 |                             |         |              |        |         |         |         |       |           |             |             |          |        |          |     |
| 144303263 | 0-300  | 0-12" | 0,001  | ±15    | 1-20N             | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •   |
| 144305263 | 0-500  | 0-20" |        | ±20    |                   | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •   |
| 144310263 | 0-1000 | 0-40" |        | ±30    |                   | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •   |
| 144315263 | 0-1500 | 0-60" |        | ±45    |                   | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •   |
| 144320263 | 0-2000 | 0-80" |        | ±60    |                   | •                           | •       | •            | •      | •       | •       | •       | •     | •         | •           | •           | •        | •      | •        | •   |

## MAIN INFO

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

**SWITCH OFF DEVICE** - button push (3 sec)/ auto switch off

**DATA TRANSFER** - programming throw menu



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

## DOWNLOAD APP

DOWNLOAD MDS APP FOR MICROTECH DEVICES

WIRELESS CONNECTION FROM [www.microtech.ua](http://www.microtech.ua),

GooglePlay & App Store



# DATA TRANSFER



MICROTECH

## 3 MODES OF DATA TRANSFER (USB + 2 WIRELESS MODES)

### WIRELESS CONNECTION TO MDS APP

WIRELESS data transfer to MICROTECH  
MDS app for Windows, Android, iOS



**FREE SOFTWARE**



**NO DONGLE**



SAVING DATA  
TO XLS. CSV  
FORMATS



TRANSFER DATA TO  
CAD, SPC OR OTHER  
SOFTWARE



TRANSFER DATA TO  
EXCEL OR OTHER  
TABLE EDITORS



SAVING  
GRAPH



### WIRELESS HID CONNECTION USB HID CONNECTION

**NO DONGLE**



TRANSFER DATA TO  
CAD, SPC OR OTHER  
SOFTWARE



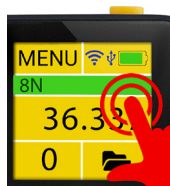
TRANSFER DATA TO  
EXCEL OR OTHER  
TABLE EDITORS



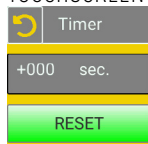
TRANSFER DATA  
TO ANY BROWSER  
OR APP

WIRELESS HID and USB HID data transfer (like keyboard) direct  
to any customers app and system

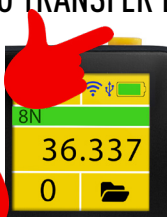
## 7 WAYS HOW TO TRANSFER DATA TO PC OR TABLET



TOUCHSCREEN TAP



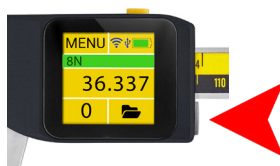
BY TIMER



BUTTON PUSH



FROM MEMORY



SELECTED FORCE



IN MDS APP



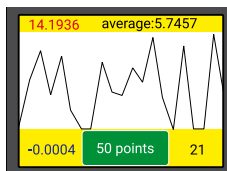
FROM PAIRED DEVICE



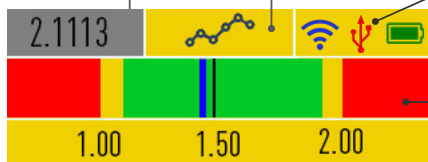
**MICROTECH**

# MAIN SCREEN

**ON-LINE  
GRAPHIC MODE**



LAST VALUE



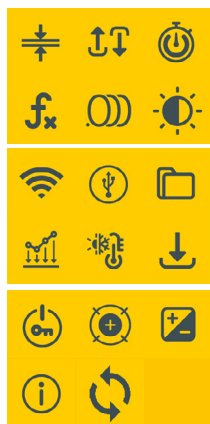
ANALOG SCALE

1.4705

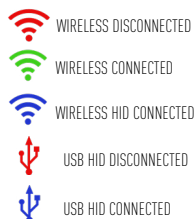
0

MENU

177



CONNECTION STATUS



## MEMORY

STANDARD or FOLDER system can be activated throw MEMORY menu



For save measuring data to internal device memory touch data area on screen or button push. You can view saved data or send by WIRELESS or USB connection to Windows PC, Android or iOS It's possible to use Standard or Folders memory modes

| Stat | All |
|------|-----|
| 7    | 7   |
| 7    | 5   |
| 7    | 2   |

FOLDERS SYSTEM

| Stat | All    |
|------|--------|
| 1:   | 0.0000 |
| 2:   | 1.2334 |
| 3:   | 1.2337 |
| 4:   | 1.2333 |
| 5:   | 1.2341 |

MEMORY 2000 VAL.

| Stat            | All  |
|-----------------|------|
| Delete or Send? |      |
| Del             | Send |

MEMORY EXPORT

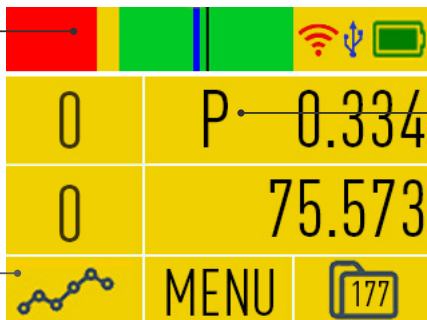
| Statistic    |
|--------------|
| MAX: +26.999 |
| MIN: 8.8673  |
| AVG: +5.3213 |
| D: +26.863   |

STATISTIC

# MAIN SCREEN on 2D mode

ANALOG SCALE

FOR PROBE MODE



2D AND HUB MODE

**PROBE** - Saving data when Probe will reach value

**PROBE Auto** - Saving data when Probe will reach value with this value compensation

**2D** - 2 axis data reading

**2D Sync** - Synchronized 2 axis data reading

**ON-LINE  
GRAPHIC MODE**



# FUNCTIONS



MICROTECH

## LIMITS mode GO/NOGO



**MAX** - **NoGo** more Upper limit  
**MIN** - **NoGo** less Lower limit  
**RANGE** - **Go** between Limits  
**NONE** - Analog scale active

## COLOR INDICATION LIMITS ON MAIN SCREEN **Go NoGo**

|       |       |                             |
|-------|-------|-----------------------------|
| >     | 2.000 | Upper limit                 |
| <     | 3.000 | Lower limit                 |
| %     | 20    | Yellow zone on analog scale |
| SCALE |       | RES                         |

## PEAK mode MAX/MIN



**DISABLE** - non active mode  
**ENABLE** - activating mode  
**REFRESH** - refresh peak value according timer

## INDICATION AND SAVING **MAX** OR **MIN** VALUES

|         |                                            |
|---------|--------------------------------------------|
| Max/Min | <b>MAX</b> - indicating MAX measured value |
| Enabled | <b>MIN</b> - indicating MIN measured value |
| MAX     |                                            |

## TIMER mode



## SAVING DATA TO MEMORY OR SENDING WIRELESS/USB BY TIMER

|           |                           |
|-----------|---------------------------|
| Timer     |                           |
| 0.000 sec | Select timer period       |
| Reset     | Reset to disactivate mode |

## FORMULA mode



|             |                                             |
|-------------|---------------------------------------------|
| Formula     |                                             |
| $Ax^2+Bx+C$ | Select FORMULA Type (Math, Radius or other) |
| Set Argv    | Select arguments                            |

## RESOLUTION selection



|            |                      |
|------------|----------------------|
| Resolution |                      |
| X.0000     | Resolution selecting |
| mm         | mm/inch conversion   |

## DISPLAY settings



Sleep OFF (15 s low brightness off, sleep off)  
 Sleep 15s (15 s low brightness on, sleep off)  
 Sleep ON (15 s low brightness on, sleep on)

|           |                                      |
|-----------|--------------------------------------|
| Display   | Display rotation 0°, 90°, 180°, 270° |
| Angle 270 |                                      |
| Sleep ON  | Brightness level                     |

## LINEAR error compensation



Re-calculation detail size to calibration conditions (20°C)

## Linear correction error's on device

|           |                                  |
|-----------|----------------------------------|
| O: 17.251 | actual values                    |
| C: 17.258 | correct values by up&down button |
| UP        | confirm point correction         |
| DN        | RES                              |

## TEMP compensation



Manual Temperature setting

|               |     |
|---------------|-----|
| Temp.com.     |     |
| Cu, Cu alloys |     |
| 27.5°C        | RES |

4 types of material for selection:

- Glass, Quartz
- Stainless steel
- Cuprum and alloys
- Alluminium and alloys



## WIRELESS data transfer

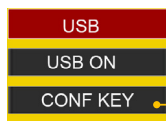


Reconnection button  
Wireless power  
regulation



**ON** - WIRELESS data transfer to MDS App for Android, iOS, Windows  
**HID** - WIRELESS HID direct transfer data to any App in Windows, MacOS, Linux, Android devices (like keyboard). Configure data format in USB sub-menu  
**2D-S** - Slave device on WIRELESS connection on HUB mode  
**2D-M** - Master device on WIRELESS connection on HUB mode

## USB OTG data transfer



Connect USB cable to PC & Activate USB HID connection mode  
Select setting of data transfer  
Direct transfer data to any App in Windows, MacOS, Linux, Android devices  
Configuring data transfer Dot/Comma and Tab/Arrow Down/CR+LF

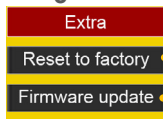
## LINK to app's



QR Link to MICROTECH web site page with MDS Software download  
- Android, iOS, Windows versions  
- Free and Pro versions  
- Manuals

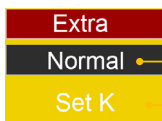


## RESET to Factory settings



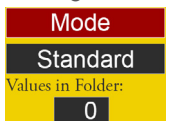
Push 10 times to RESET device to factory settings  
Push 10 times to FIRMWARE UPDATE

## EXTRA



Selecting normal or inverted axis mode (+/- value indication)  
Coefficient setting (for distributor and calibration only)

## MEMORY manager setting



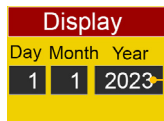
Activating STANDARD or FOLDER SYSTEM

Values in each Folder



FOLDERS SYSTEM

## CALIBRATION date info



Push for change calibration date info

## Device INFO

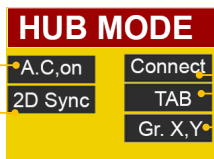


Information about device  
- Firmware version  
- MAC adress for WIRELESS connection



## HUB connection

**A.C.on** - Auto Connection active  
**A.C.off** - Auto Connection no active



External Wireless device connection

Symbol between Axis

Graphic mode indication setting

**PROBE** - Saving data when Probe will reach value

**PROBE Auto** - Saving data when Probe will reach value with this value compensation

**2D** - 2 axis data reading

**2D Sync** - Synchronized 2 axis data reading

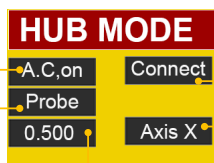
**Disable** - switch off modes

## 2D MODE

### 2D CONNECTION PROCESS

1. **Slave device** WIRELESS menu- 1.1 Push **CLEAR** button and 1.2 Activate 2D Slave mode **2D-S**
2. **MASTER device** WIRELESS menu- 2.1 Push **CLEAR** button and 2.2 Activate 2D Master mode **2D-M**
3. **MASTER device** HUB connection menu- 3.1 Activate **2D** or **2D Sync** mode and 3.2 Setting **A.C.on/off** (auto-reconnect) and 3.3 setting of saving on memory and transfer data (X, Y or XY synchronized)
4. **MASTER device** HUB connection menu- 4.1 Push **CONNECT** button and start searching Slave devices (40s)  
 4.2 push for MAC adress of indicated slave device to start connection. 4.3. If **MASTER device** indicate **SUCCESSFUL CONNECTION** - you can start measurings, but If **MASTER device** indicate **CONNECTION ERROR** - re-connect devices again (from step 1).

**A.C.on** - Auto Connection active  
**A.C.off** - Auto Connection no active



External Wireless device connection

**PROBE** - Saving data when Probe will reach value

**PROBE Auto** - Saving data when Probe will reach value with this value compensation

**2D** - 2 axis data reading

**2D Sync** - Synchronized 2 axis data reading

**Disable** - switch off modes

Axis priority selecting

Setting PROBE limit value

## PROBE MODE

### 2D CONNECTION PROCESS

1. **Slave device** WIRELESS menu- 1.1 Push **CLEAR** button and 1.2 Activate 2D Slave mode **2D-S**
2. **MASTER device** WIRELESS menu- 2.1 Push **CLEAR** button and 2.2 Activate 2D Master mode **2D-M**
3. **MASTER device** HUB connection menu- 3.1 Activate **PROBE** or **PROBE Auto** mode and 3.2 Setting **A.C.on/off** (auto-reconnect) and 3.3 Axis priority and 3.4 Probe limit value
4. **MASTER device** HUB connection menu- 4.1 Push **CONNECT** button and start searching Slave devices (40s)  
 4.2 push for MAC adress of indicated slave device to start connection. 4.3. If **MASTER device** indicate **SUCCESSFUL CONNECTION** - you can start measurings, but If **MASTER device** indicate **CONNECTION ERROR** - re-connect devices again (from step 1).

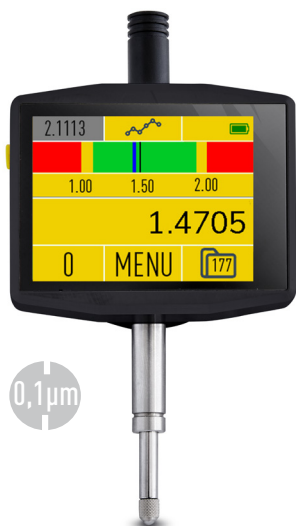
VIDEO INSTRUCTION of 2D and  
 PROBE MODE CONNECTION



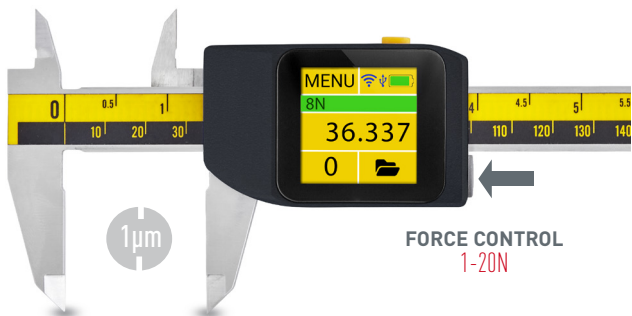


**MICROTECH**

# INDUSTRY 4.0 INSTRUMENTS



0,1µm



**FORCE CONTROL**  
1-20N



0,1µm



0,1µm



1µm

**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