



EXTERNAL SPHERE COMPUTERIZED GAUGE

USER MANUAL



Calibration ISO 17025:2017



ISO 9001:2015

Item No	Radius		Type	Resolution	Display	Data output
	mm	inch				
1250711206	320-1250	12-50"	external	1 μm	Color 1.5" Touch-screen	WIRELESS+USB



Select SPHERE

-Come throw menu to **Formula mode** and select **SPHERE formula**

Set ZERO position on flat platform and push ZERO button, then you can meake measuring.

(In ranges close to Zero - will be indicating big values, about formula recalculation from linear to radius measurements, don't care for this)



Parameters	
LED display	color 1,54 inch
Resolution	240x240
Indication system	MICS 3.0
Power supply	Rechargeable Li-Pol battery
Battery capacity	450-800 mAh (depends of device)
Charging port	micro-USB
Case material	Aluminium
Buttons	Switch (Multifuntional), Reset
Wireless data transfer	up to 50m on open area

CHARGING



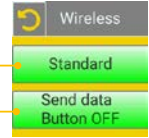
BUILT-IN BATTERY - rechargeable Li-Pol battery

For charging connect USB cable
Charging process indicating
on Battery status
(switch on device)



Activate WIRELESS data transfer in CONNECTION menu

Switch on Wireless data transmission
 Activating multifunctional button to save value to memory or send data by touchscreen or button push



Connect instrument with MICS indication system to Tablet or PC
 Send data to Tablet or PC:

- by Touchscreen
- by Multifunctional button push (activated in CONNECTION menu)
- by Timer (activated in Timer menu)
- from Internal Memory

MEMORY

For save measuring data to internal caliper's memory touch data area on screen or short button push. You can view saved data through menu or send Wireless connection to Windows PC, Android or iOS devices.

Basic STATISTIC functions:

- MAX - maximum saved value
- MIN - minimum saved value
- AVG - average value
- D - variance VAR(x)

Statistic	Value
MAX:	+26.999
MIN:	8.8673
AVG:	+5.3213
D:	+26.863

Saved values
 Each value can be Deleted or Send to application

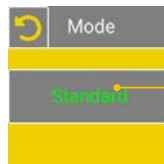
Value
+7.3563
-0.1109
+1.2293
+26.9993
-8.8673

Button ALL select all values
 All values can be Deleted or Send to application



MEMORY settings

Memory sub-menu



Selecting Standard mode or
 No saving data to internal memory



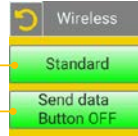
CONNECT MICRO-USB CABLE TO RADIUS GAUGE FIRSTLY

Activate USB data transfer in CONNECTION menu

Data will be send in USB HID mode to any app directly

Switch on USB data transmission

Activating multifunctional button to save value to memory or send data by touchscreeb ur button push



Configure USB data transfer format



Connect instrument with **MICS** indication system to Tablet or PC

Send data to Tablet or PC:

- by Touchscreen
- by Multifactional button push (actived in CONNECTION menu)
- by Timer (activated in Timer menu)
- from Internal Memory



USE TOUCHSCREEN TO OPERATE MENU

MENU button	MENU		Battery level
Colour can be changed according function	-0.0000		Actual value
Zero setting	0		Memory

MEMORY WITH STATISTIC

ALL	Statistic
+7.3563	MAX: +26.999
-0.1109	MIN: 8.8673
+1.2293	AVG: +5.3213
+26.9993	D: +26.863
-8.8673	

MENU CONFIGURATION



MAIN MENU



LIMITS
color Go/NoGo

MAX/MIN
indicating max or min value

FORMULA MODE
 Ax^2+Bx+C



ERROR COMPENSATION
mathematical correction

TEMPERATURE COMPENSATION
manual correction

RESOLUTION
selected up to 0.0001mm



WIRELESS
modes of data transmission

USB
USB connection configuration

DEVICE SETTING
pin, reset



MEMORY SETTING

SOFTWARE
link to download app

CALIBRATION DATE

www.microtech.us
 COMP CALIPER 1
 FW: 3.0.5
 MAC: 12345



LIMITS GO/NOGO

MENU SETTING	Colour indication limits	MAIN SCREEN INDICATION
	<p>MAX - NoGo more MAX value MIN - NoGo less MIN value RANGE - Go between MIN & MAX NONE - disactivating mode</p>	

MAX/MIN

MENU SETTING	Indication and saving MAX or MIN values	MAIN SCREEN INDICATION
	<p>ENABLE - activating mode MAX - indicating MAX measured value MIN - indicating MIN measured value</p>	

FORMULA

MENU SETTING	FORMULA Ax^2+Bx+C	EXAMPLE OF FORMULA USING
	<p>Formula: Ax^2+Bx+C</p> <p>A +000.000 Long push digit to select value B +001.000 C +000.000 RESET Reset to zero arguments</p>	<p>Standard measuring A=0, B=1, C=0 PRESET 50mm A=0, B=1, C=50 Value magnification x3 A=0, B=3, C=0 Square value A=1, B=0, C=0</p>

TIMER

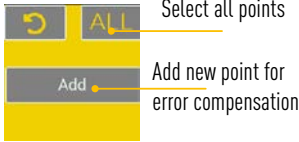
MENU SETTING	Saving data to memory or sending Wireless by Timer
	<p>Select timer period Reset to disactivate mode</p>



MATHEMATICAL ERROR COMPENSATION

MENU SETTING

Mathematical correction points with big error to normal values



Select all points

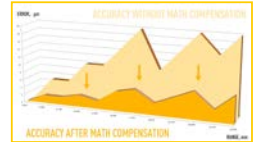
Add new point for error compensation



actual values

correct values by up&down button

confirm point correction



use gauge blocks or measuring machine for points correction



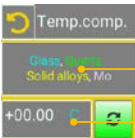
TEMPERATURE COMPENSATION

MENU SETTING

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

7 types of material:

- glass, quartz, solid alloys
- granite, graphite
- Fe, Ni, Fe alloys
- stainless steel
- cooper, Cu alloys
- aluminium, al alloys
- acrylic sheet



7 types of material for selection

Manual Temperature setting



RESOLUTION

MENU SETTING



Resolution selecting

mm/inch conversion

MAIN SCREEN INDICATION

+8.0608

Selecting resolution of value on main screen and memory



EXTRA (Axis mode)

MENU SETTING



Selecting normal or inverted axis mode (+/- value indication)

Reading base reconnection for some types of calipers



CONNECTION

MENU SETTING Activating or deactivating wireless data transfer



Switch between Wireless/USB/ no data

Activating multifunctional button to save value to memory or send data by touchscreen or button push



USB CONFIGURATION

MENU SETTING



PIN & RESET

MENU SETTING

Activating PIN to device setting

RESET to factory settings



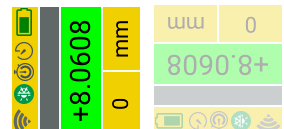
DISPLAY SETTING

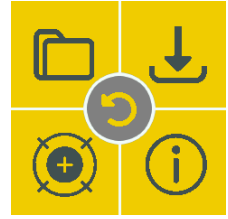
MENU SETTING DISPLAY ROTATION, BRIGHTNESS, SLEEPING MODE



Display rotation 0°, 90°, 180°, 270°

- 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)





MEMORY SETTINGS

MENU SETTING Activating or disactivating saving values to memory



Standard - saving values to memory
OFF - disable saving to memory

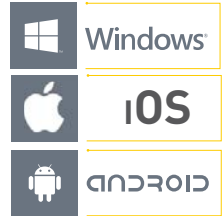
ALL
+7.3563
-0.1109
+1.2293
+26.9993
-8.8673

LINK TO SOFTWARE

MENU SETTING



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



CALIBRATION DATE

MENU SETTING Calibration date info



Push for change date info

DAY	01
MONTH	01
YEAR	2021

DEVICE INFO

MENU SETTING



Information about device
 - device name
 - firmware version
 - MAC adress for easy connection



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