MA10402 - AIR QUALITY MONITOR
Instructions manual

FEATURES:

LCD display

Function buttons

Battery compartment
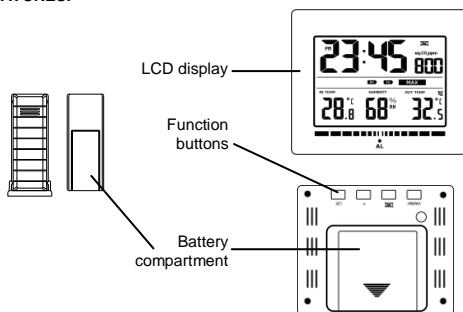
- Quartz clock
- 12/24h time display
- Indoor and outdoor temperature display in °C/°F
- Indoor humidity display in %RH
- Air quality sensor for monitoring of indoor air quality
- Display of CO_2 equivalent values and quality indicator
- Air quality alarm per LED
- Low battery indicator

SETTING UP:

- Open the battery cover at the back of the transmitter and open the battery cover at the back of the air quality monitor.
- Checking the correct polarization (+/- markings), insert 2 x AAA, LR03, 1.5V batteries into the battery compartment of the outdoor transmitter and insert 2 x C, LR14, 1.5V batteries into the battery compartment of the air quality monitor. Replace the covers.
- When the batteries are inserted, all the segments of the LCD will light up briefly. The monitor will receive data signal from the outdoor transmitter in a few seconds.
- Hold the SET button for 3 seconds to manually enter a time. (See "Manual Settings".)

Notes:

- The equivalent CO_2 in ppm will only be displayed after 30 minutes.
- The air quality sensor will take up to 5 days after inserting battery to condition itself for the room it is placed. If the unit is placed into another room, there might be a reconditioning time of several days as well.
- Insert the holder to the bottom of the outdoor transmitter for table standing or insert it to the back of the transmitter for wall mounting purpose.
- Set the air quality monitor in a dry and shaded interior and away from sources of interference, such as televisions or metal plates. The transmitter should be mounted protected from rain and direct sunlight.

REPLACING THE BATTERY IN THE AIR QUALITY MONITOR
The outdoor transmitter uses 2 x AAA, LR03, 1.5V batteries.
The air quality monitor uses 2 x C, LR14, 1.5V batteries.
To replace the batteries, please follow the steps below:

- Remove the cover at the back of the air quality monitor or the outdoor transmitter. Remove the old batteries and wait 2 minutes before the next step.
- Insert batteries observing the correct polarity (see marking).
- Replace compartment cover.

BATTERY CHANGE:
It is recommended to replace the battery regularly to ensure optimum accuracy of the unit.

Add device to MOBILE-ALERTS system
(MOBILE ALERTS gateway needed, sold separately)

Open the app, dashboard is displayed. Tap "Add new sensor" and scan the QR code on the back of the MA10402. Then set a name for the sensor. To set a name, select the transmitter and then tap on the left area of the pencil icon in the upper right.

Read measurements
Now you can read the measurements on your mobile phone.

BUTTON FUNCTIONS:
The Air Quality Monitor has 4 easy-to-use buttons (at his back) :

SET button   + button   ALERT OFF button   MIN / MAX button
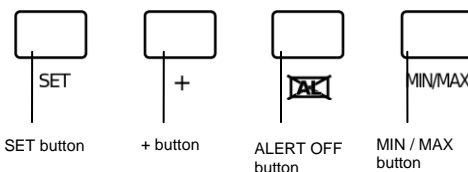
SET button:
- Press and hold to enter the manual setting modes:12/24 hour time display, manual time setting, ºC / ºF temperature display,
- Exit the manual setting mode

+ button:
- Press to change values of all manual settings by 1 unit.
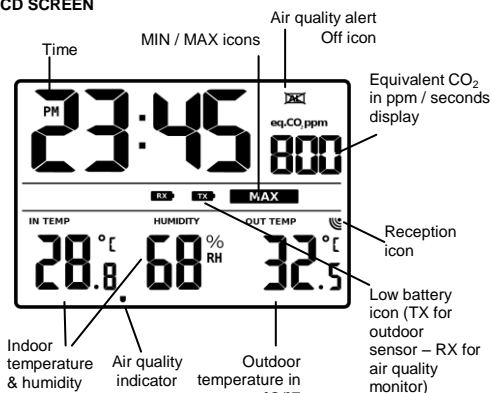- Press and hold to speed up manual setting.

ALERT button:
- Press to set the air quality alert to ON / OFF

MIN / MAX button:
- Press to view MIN and MAX temperature and humidity values
- Press and hold to reset recorded MIN and MAX values

LCD SCREEN

Time

MIN / MAX icons

Air quality alert Off icon

Equivalent CO_2 in ppm / seconds display

Reception icon

Low battery icon (TX for outdoor sensor – RX for air quality monitor)

Indoor temperature & humidity

Air quality indicator

Outdoor temperature in ºC/°F

MANUAL SETTINGS:
The following manual settings can be done in the setting mode:
- 12/24 hour time setting
- Time setting
- ºC / ºF temperature display setting

Press and hold the SET button for about 3 second to enter the setting mode:

12/24 HOUR TIME DISPLAY SETTING
- "12hr" or "24hr" flashes in the LCD. (default 24hr)
- Press the **+** button to select the "12hr" or "24hr" display mode.

- Press the **SET** button to confirm and continue to the **manual time setting**.

MANUAL TIME SETTING
To set the clock:
- The hour digits start flashing in the time display section.
- Press the **+** button to adjust the hours and then press the **SET** button to go to the minute setting.
- The minute will be flashing. Press the **+** button to set the minutes.
- Press the **SET** button to confirm and continue to the **°C/°F temperature setting**.

°C/°F TEMPERATURE UNIT SETTING
The default temperature reading is set to °C (degree Celsius). To select °F (degree Fahrenheit):
- The "°C" will be flashing, use the **+** button to toggle between "°C" and "°F".
- Press the **SET** button to confirm and **exit the manual settings**.

MIN/MAX values for temperature and humidity
Press the **MIN/MAX** button for displaying of max./min. of temperature and humidity. Press and hold the **MIN/MAX** button to reset recorded MIN and MAX values.

AIR QUALITY ALERT SETTING
Press the **ALERT OFF** button to activate the air quality alert. The air quality alert OFF icon indicates that the alert is set off. No air quality OFF icon indicates that the alert is activated.

Note:
The LED Alert blinks, if the air quality alert is activated and the **Equivalent CO_2 ppm is higher than 1500ppm:**

AIR QUALITY INDICATOR
The air quality indicator is located on the bottom of the LCD. It changes from "Green" to "Gray"by according to the equivalent CO_2 ppm value.

Air quality indicator

Bar graph

Equivalent CO_2 ppm (parts per million) value*
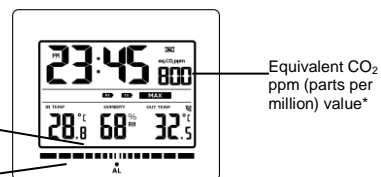
* The air quality value shown, after sensor conditioning, may differ +/- 250 ppm.

Note:
A 9-level bar graph is used to indicate "Green" to "Gray" air quality level in the surrounding environment:

Levels	Equivalent CO_2 ppm
Green (Level 1)	450 – 600 ppm
Level 2	650 – 800 ppm
Level 3	850 – 1000 ppm
Level 4	1050 – 1200 ppm
Level 5	1250 – 1500 ppm
Level 6	1550 – 1800 ppm
Level 7	1850 – 2100 ppm
Level 8	2150 – 2400 ppm
Gray (Level 9)	≥ 2450 ppm

Troubleshooting
When no sensor readings are displayed in the app, check if the green LED on the gateway is permanently lit. If not, please check if:
- The gateway is properly connected to the power plug, the router and is turned on.
- Restart the station by removing the batteries for a minute and reinserting, to restart the device.
- Your phone is connected to the internet.

- The signal is weakened by thick walls and ceilings. Put the device in operation near the gateway and then locate a suitable location.

More information and detailed instructions can be found in the app at "Info" or at **www.mobile-alerts.eu**

Summary of the Declaration of Conformity: We hereby declare that this device does comply with the requirements of RED Directive 2014/53/EU.
The declaration of Conformity can be found at: **www.mobile-alerts.eu/technoline/doc**

SPECIFICATIONS:
Recommended temperature range: +5ºC to +40ºC / +41ºF to 104ºF

Temperature measuring range:
Indoor: -9.5ºC to +59.5ºC with 0.5ºC resolution / 14.0ºF to +139.5ºF with 0.5ºF resolution (OFL displayed if outside this range. In degree F display, OFL will displayed when over 99.9ºF)
Outdoor: - 39.9ºC to +59.9ºC with 0.1ºC resolution / -39.8ºF to +139.8ºF with 0.2ºF resolution (OFL displayed if outside this range. In degree F display, OFL will displayed when over 99.9ºF)

Relative humidity measuring range:
Indoor: 20% to 95% with 1% resolution (display "- -" if temperature is OFL, except when the temperature is 100ºF to 139.8ºF; display "19%" if < 20% and "96%" if > 95%)

Equivalent CO_2 ppm measuring range:
450ppm to 3950ppm with 50ppm resolution (display OFL > 3950ppm)

Measuring intervals:
Indoor temperature checking interval: every 16 seconds
Indoor humidity checking interval: every 16 seconds
Air quality level checking interval: every 3 minutes

Transmission:
Transmission range: 100m / 330 feet
Transmission frequency: 868 MHz
Maximum transmission power MA10402: 3.8 dBm
Maximum transmission power TX47-IT: 5.2 dBm

MA10402 dimensions (L x W x H):   142,5 x 117,1 x 41,6 mm
MA10402 power consumption: 2 x C Baby LR14, 1.5V
TX47-IT dimensions (L x W x H):   32 x 87 x 17 mm
TX47-IT power consumption: 2 x LR03 Micro AAA, 1.5V

Trouble shooting
Keep in mind that the outdoor transmitter only has the optimal transmission range in open area with no obstructions. Each obstruction between the transmitter and the station (roof, walls, floors, ceilings, thick trees, etc.) will effectively cut the transmission range in half.

Liability disclaimer
- The electrical and electronic wastes contain hazardous substances. Disposal of electronic waste in wild country and/or in unauthorized grounds strongly damages the environment.
- Please contact your local or/and regional authorities to retrieve the addresses of legal dumping grounds with selective collection.
- All electronic instruments must from now on be recycled. User shall take an active part in the reuse, recycling and recovery of the electrical and electronic waste.
- The unrestricted disposal of electronic waste may do harm on public health and the quality of environment.
- Reading of the "User manual" is highly recommended for the benefit of the user. This product must however not be thrown in general rubbish collection points.
- The manufacturer and supplier cannot accept any responsibility for any incorrect readings and any consequences that occur should an inaccurate reading take place.
- This product is designed for use in the home only as indication of the measured data.

- This product is not to be used for medical purposes or for public information.
- The specifications of this product may change without prior notice.
- This product is not a toy. Keep out of the reach of children.
- No part of this manual may be reproduced without written authorization of the manufacturer.

Precautions
- This main unit is intended to be used only indoors.
- Do not subject the unit to excessive force or shock.
- Do not expose the unit to extreme temperatures, direct sunlight, dust or humidity.
- Do not immerse in water.
- Avoid contact with any corrosive materials.
- Do not dispose this unit in a fire as it may explode.
- Do not open the inner back case or tamper with any components of this unit.

Batteries safety warnings
- Use only alkaline batteries, not rechargeable batteries.
- Install batteries correctly by matching the polarities (+/-).
- Always replace a complete set of batteries.
- Never mix used and new batteries.
- Remove exhausted batteries immediately.
- Remove batteries when not in use.
- Do not recharge and do not dispose of batteries in fire as the batteries may explode.
- Ensure batteries are stored away from metal objects as contact may cause a short circuit.
- Avoid exposing batteries to extreme temperature or humidity or direct sunlight.
- Keep all batteries out of reach from children. They are a choking hazard.

Use the product only for its intended purpose!

Consideration of duty according to the battery law
Old batteries do not belong to domestic waste because they could cause damages of health and environment. You can return used batteries free of charge to your dealer and collection points. As end-user you are committed by law to bring back needed batteries to distributors and other collecting points!

Consideration of duty according to the law of electrical devices
This symbol means that you must dispose of electrical devices separated from the General household waste when it reaches the end of its useful life. Take your unit to your local waste collection point or recycling centre. This applies to all countries of the European Union, and to other European countries with a separate waste collection system.