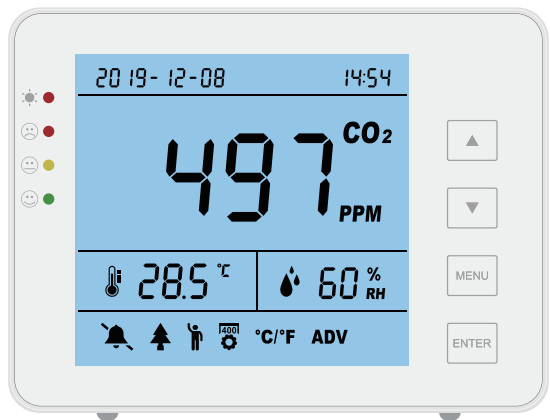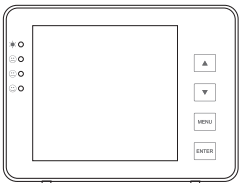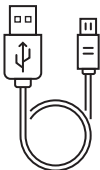# CO2 MONITOR - CO-20-Pro
Instruction Manual

CE RoHS 2.0 REACH CO2/TEMP/RH

Packing List

1. CO2 Monitor Unit

2. USB Cable for Power

3. User's Manual

Warning

- The provided USB cable can be ONLY used as power supply for this device.
- Do NOT disassemble this device or change internal wiring.
- Do not store or use this product in high temperature, high humidity, flammable, explosive and strong electromagnetic environment.
- Do NOT run restore factory defaults too often, or it will cause program damage.
- Keep this device away from your face, or the exhaled carbon dioxide will affect its accuracy.

Getting Started

Thanks for purchasing SA1300P air quality monitor (CO2/TEMP/RH). This product is applied to display CO2 concentration, temperature and humidity for indoor air quality monitoring.

Features at a Glance

- HD Large Display
- Wall mounted and Desktop
- Touch Button Operation
- 15°Bevel Design, Easy to Read
- Low Drift NDIR Sensor, Long Lifespan
- Audible and Visual Alarm
- Temperature, Humidity and CO2 Monitor, Date and Time Display
- Auto-calibration and Manual Calibration

Restore Factory Defaults

In Detection Panel (See Pic.1 in Page 2), hold ENTER for 3 seconds until an audible beep is heard.

Overview
Drawing Sketch and Components List

(Pic.1: Detection Panel)

(Pic.2: Operation Panel)

LCD   Front Panel

power Indicator
Red Condition Indicator
Orange Condition Indicator
Green Condition Indicator

UP Button
Down Button
Menu Button
Enter/OK Button

USB Port

Hole for Rope   Hole for Screws

Hole for Buzzer

Label

LCD Display

Date (Year/Month/Day)   Time

CO2 Reading

Temperature Reading °C/°F   Humidity Reading %

Main Menu Bar
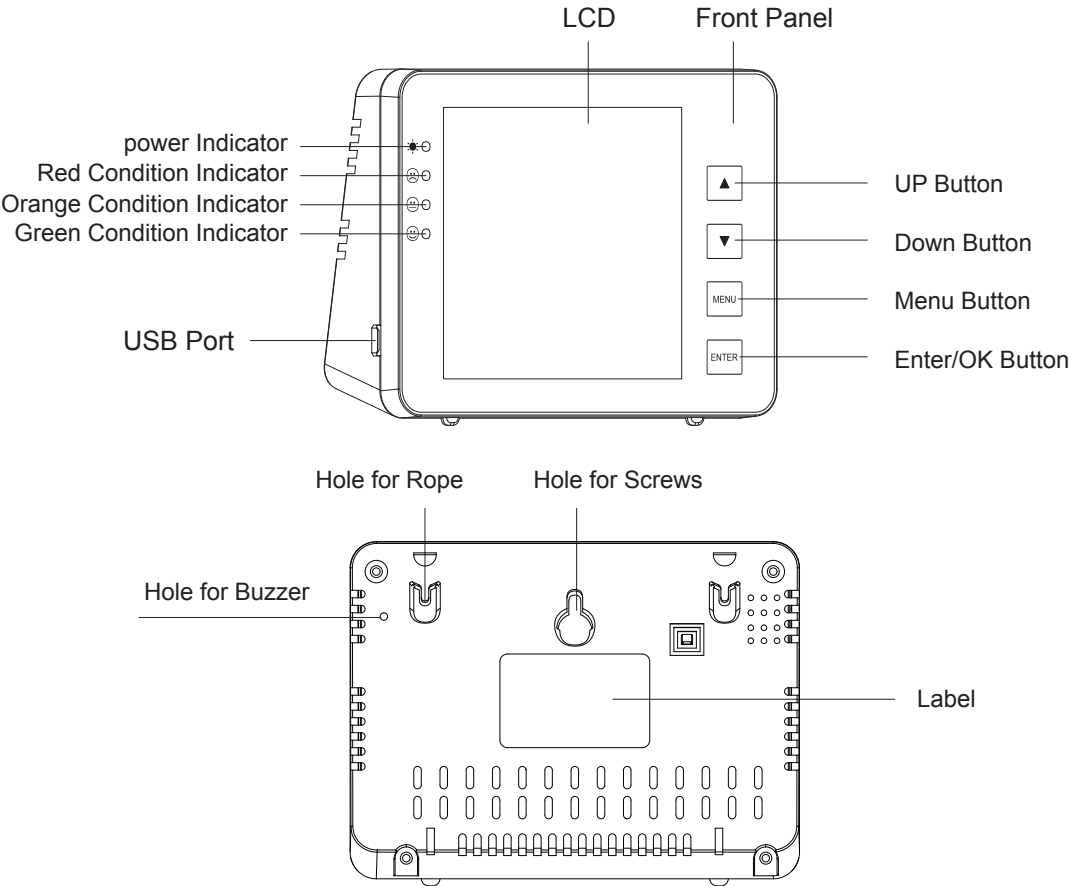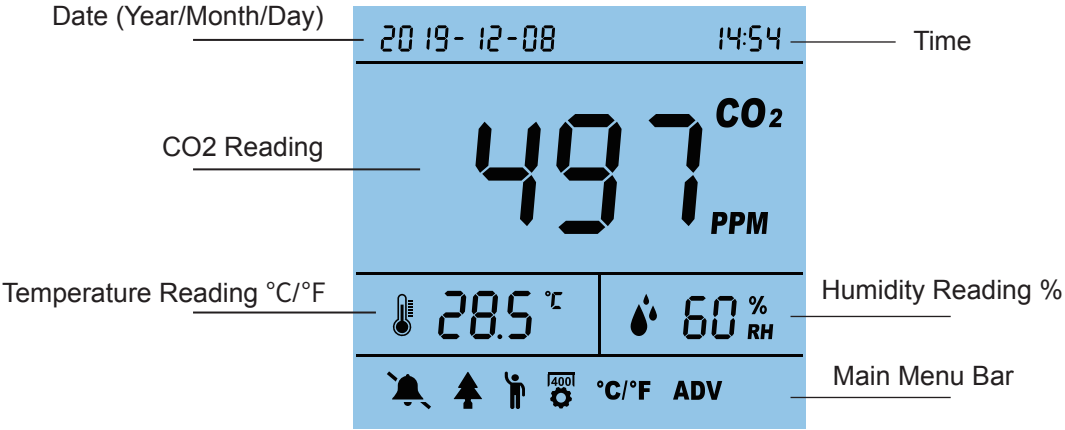
Icon	Description	Icon	Description
🔕	Mute	Manual Calibration	Manual Calibration
🔔	Audible Alarm	°C	Degree Celsius
🌲	Plant Mode	°F	Degree Fahrenheit
🧍	Human Mode	ADV	Alarm Point Setting
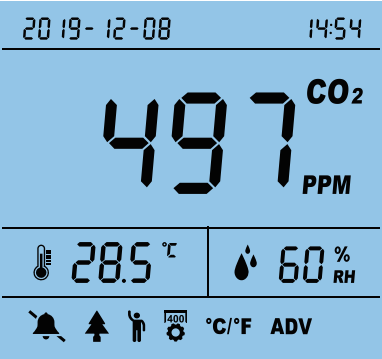
Time & Date

In detection panel(See Pic.1), press and hold [▲] 3 seconds to active date and time settings.Press [▲] / [▼] to select each item.

```
┌─────────────────────────────────┐
│      ┌──────────────────┐        │
│      │ Detection Panel  │        │
│      └──────────────────┘        │
│              │                   │
│              │ Press and hold [▲] 3 seconds
│              ▼                   │
│   [2019-09-25      10:08]        │
│              ▲                   │
│   Press [▲] │ │ Press [▼]        │
│              │                   │
│   [2019-09-25      10:08]        │
│              ▲                   │
│   Press [▲] ┊ ┊ Press [▼]        │
│              ▼                   │
│   [2019-09-25      10:08]        │
└─────────────────────────────────┘
```

```
┌──────────────────────────────────────────────┐
│         [2019-09-25      10:08]                │
│                  │                             │
│                  │ Press [ENTER]               │
│                  ▼                             │
│         [2019-09-25      10:08]                │
│          ╱              ╲                      │
│   Press [▲]          Press [▼]                 │
│      ▼                    ▼                    │
│ [2019-10-25  10:08]   [2019-08-25  10:08]      │
│      │                    │                    │
│  Press [ENTER]        Press [ENTER]            │
│      ▼                    ▼                    │
│ [2019-10-25  10:08]   [2019-08-25  10:08]      │
├──────────────────────────────────────────────┤
│ Follow the same steps to set time and date.   │
└──────────────────────────────────────────────┘
```
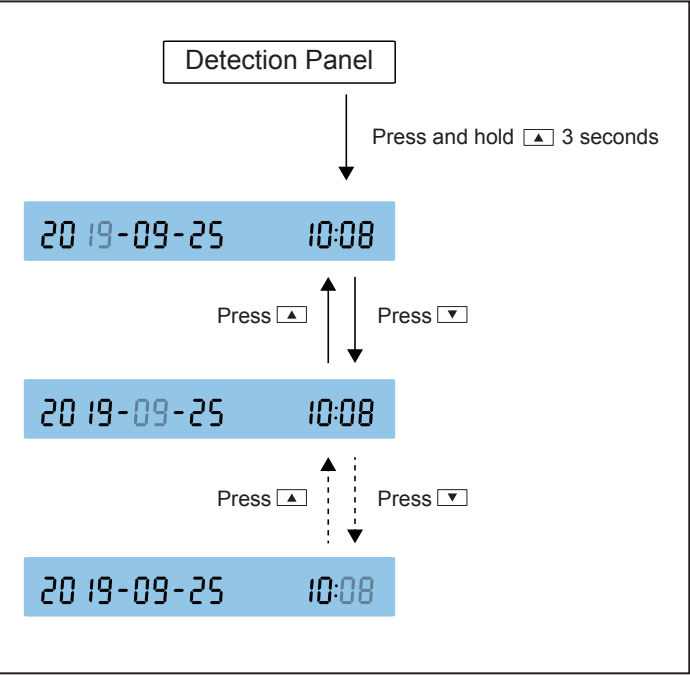
Main Menu

Press [MENU] once to active the main menu functions. Press [▲] / [▼] / [MENU] to bring up the main menu, with an underlining flashing bar indicating the current choice.
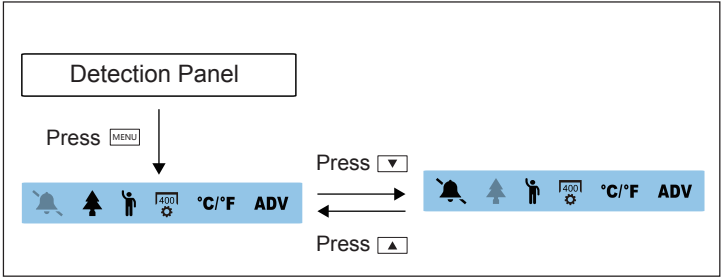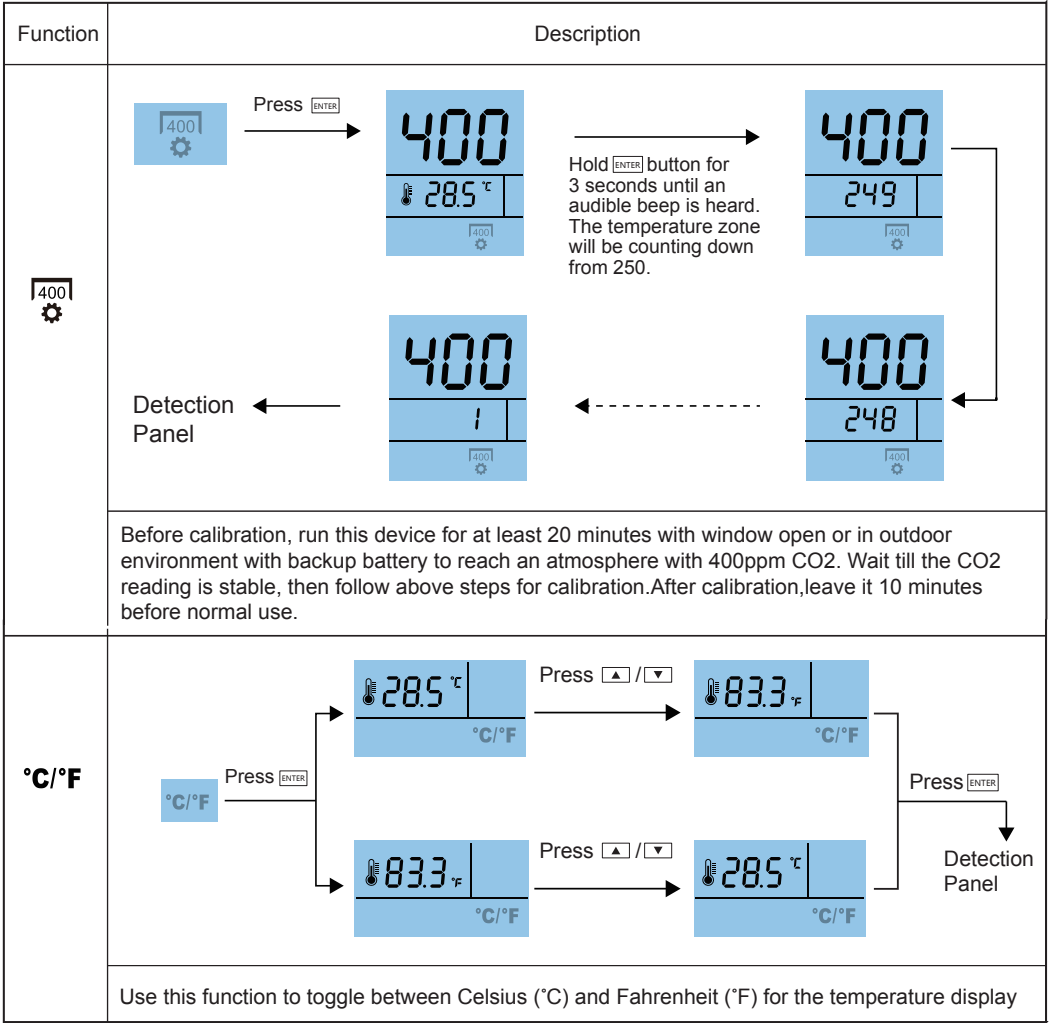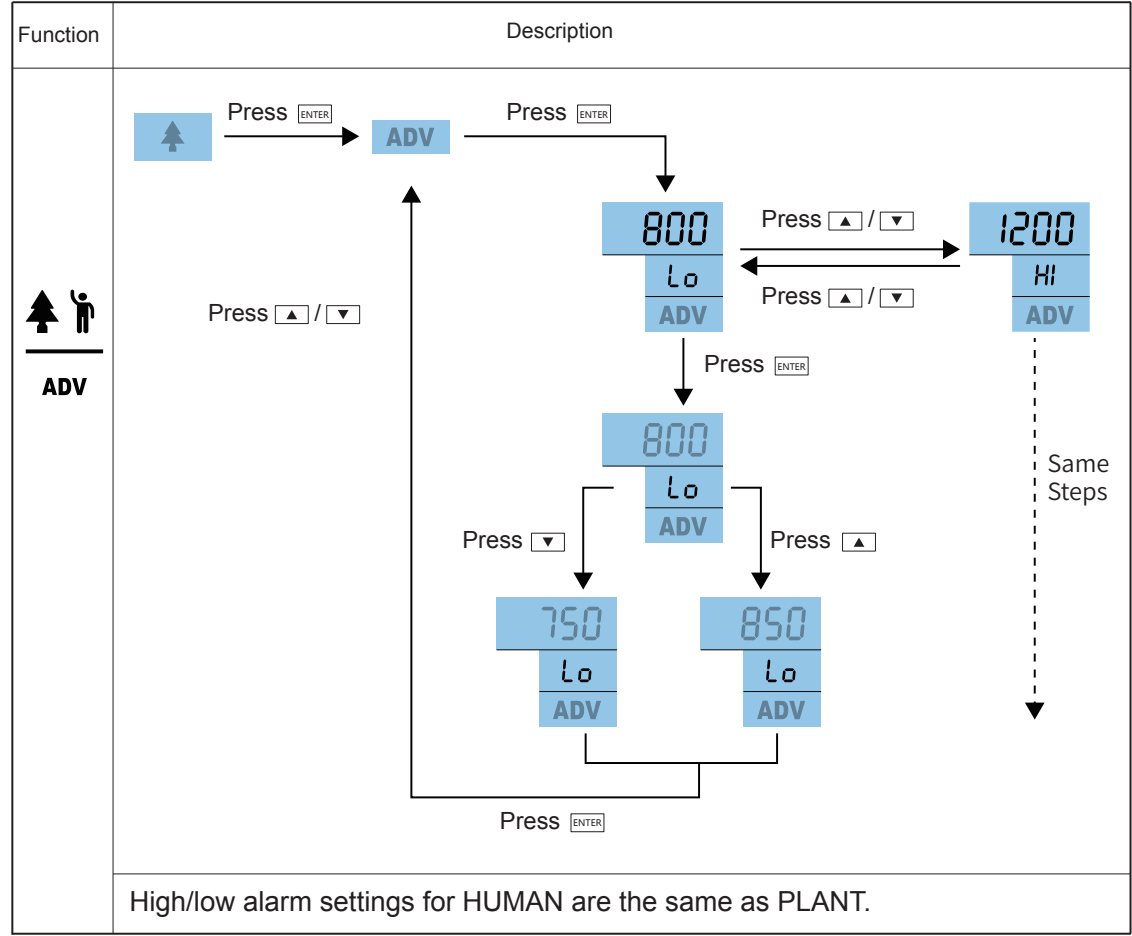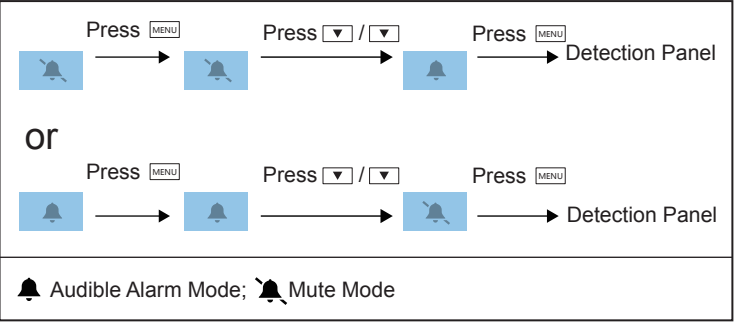
To select a certain function, press [ENTER] when it is underlined by the flashing bar. After the setting is completed, press [ENTER] to confirm and exit.

Note: if no operation in 1 minute, the main menu bar will disappear and the device will revert to the normal state (Detection Panel, See Pic.1 in page 5).

```
┌────────────────────────────────────────────┐
│       ┌──────────────────┐                  │
│       │ Detection Panel  │                  │
│       └──────────────────┘                  │
│              │                              │
│   Press [MENU]│            Press [▼]         │
│              ▼          ──────────►          │
│  [🔔 🌲 👤 ⚙ 400 °C/°F ADV] ⇄ [🔔 🌲 👤 ⚙ 400 °C/°F ADV] │
│                         ◄──────────          │
│                            Press [▲]         │
└────────────────────────────────────────────┘
```

```
┌──────────────────────────────────────────────┐
│ Press [MENU]   Press [▼]/[▼]   Press [MENU]    │
│  [🔔] ──────► [🔔] ──────────► [🔔] ──► Detection Panel │
│                                               │
│ or                                            │
│                                               │
│ Press [MENU]   Press [▼]/[▼]   Press [MENU]    │
│  [🔔] ──────► [🔔] ──────────► [🔔] ──► Detection Panel │
├──────────────────────────────────────────────┤
│ 🔔 Audible Alarm Mode;  🔕 Mute Mode           │
└──────────────────────────────────────────────┘
```

Function	Description
🌲 👤 **ADV**	(See diagram)

```
 [🌲] ─Press [ENTER]─► [ADV] ─Press [ENTER]─►
                              │
   Press [▲]/[▼]              │
        │                     ▼
        │            [800 / Lo / ADV] ⇄ [1200 / HI / ADV]
        │             Press [▲]/[▼]    Press [▲]/[▼]
        │                     │
        │               Press [ENTER]
        │                     ▼
        │            [800 / Lo / ADV]
        │              ╱         ╲
        │       Press [▼]     Press [▲]
        │          ▼             ▼
        │   [750 / Lo / ADV]  [850 / Lo / ADV]
        │          │             │
        │          └─────┬───────┘
        │          Press [ENTER]
        └──────────────────►        Same Steps
```

High/low alarm settings for HUMAN are the same as PLANT.

Function	Description
[400 ⚙]	(See diagram)

```
 [400⚙] ─Press [ENTER]─► [400 / 28.5℃ / ⚙]
                              │
    Hold [ENTER] button for   │
    3 seconds until an        ▼
    audible beep is heard.  [400 / 249 / ⚙]
    The temperature zone      │
    will be counting down     ▼
    from 250.               [400 / 248 / ⚙]
                              │
 Detection ◄── [400 / 1 / ⚙] ◄┄┄┄┘
   Panel
```

Before calibration, run this device for at least 20 minutes with window open or in outdoor environment with backup battery to reach an atmosphere with 400ppm CO2. Wait till the CO2 reading is stable, then follow above steps for calibration.After calibration,leave it 10 minutes before normal use.

Function	Description
°C/°F [°C/°F]	(See diagram)

```
 [°C/°F] ─Press [ENTER]─►
     ┌──► [28.5℃ / °C/°F] ─Press [▲]/[▼]─► [83.3℉ / °C/°F] ─┐
     │                                              Press [ENTER]
     └──  [83.3℉ / °C/°F] ◄─Press [▲]/[▼]─ [28.5℃ / °C/°F] ◄─┘ ─► Detection Panel
```

Use this function to toggle between Celsius (°C) and Fahrenheit (°F) for the temperature display

Specification

Typical test conditions: Ambient Temp:23±3℃, RH=50%~70%, Altitude=0~100 meters

Measurement	Specifications
Operating temperature	32°F ~ 122°F (0°C ~ 50°C)
Storage temperature	14°F ~ 140°F (-10°C ~ 60°C)
Operating & storage RH	0-95% (non-condensing)
CO2 Measurement	
0~3000ppm	±50 ppm +5% of reading
>3000ppm	±50 ppm +7% of reading
Measuring range	0-5000 ppm
Display resolution	1ppm (0-1000); 5ppm (1000-2000); 10ppm (>2000)
Temp compensation	±0.2% of reading per °C (Reference of 25°C)
Response time	<2 minutes for 63% of step change or <4.6 minutes for 90% step change
Warm-up time	<20 seconds
Temperature Measurement	
Operating temperature	32~195°F (0~90°C)
Display resolution	0.1°F (0.1°C)
Response time	<20 minutes (63%)
Humidity Measurement	
Measuring range	5~95%
Accuracy	±5%
Display resolution	1% main interface display
Operating voltage	DC(5±0.25)V
Dimension	120*90*35mm
Weight	170g device only