# R-138a   3 Beds Diaper Wetness Display

Functions

- Receive signals from wetness sensors and call buttons of 3 users.
- Display the status of users including diaper wetness and call events.
- Configure the sensitivity of different wetness levels.
- Bidirectional transfer/receive of signals from/to wetness sensors and call buttons for a reliable communication.
- Networking – signals from wetness sensors and call buttons can be forwarded to the Wetness Care system.
- Signal repeating – a tree-topology network can be formed and the devices can act as repeaters.
- The network can be optimized easily – Wetness Care system controls the hierarchy.
- Anti-glare – darker indication LEDs in dark environments.
- The brightness of indication LEDs can be set using the Wetness Care system.

Specifications

Power supply	AC adapter 5V DC
Battery	LC 18650 3.7V Lithium battery
Power consumption	Max 100mA
Low battery indication	3.4V – acknowledge, 3.2V – power off
Installation	Wall-hanging
Number of users	Max 3 users
Communication	433.92MHz, FSK, 57.6K bit rate
Address length	16 bit
Operating temperature range	0 – 60 ℃

Instructions of use

Status display and user selection

Power

Communication LED

Network LED

Mute
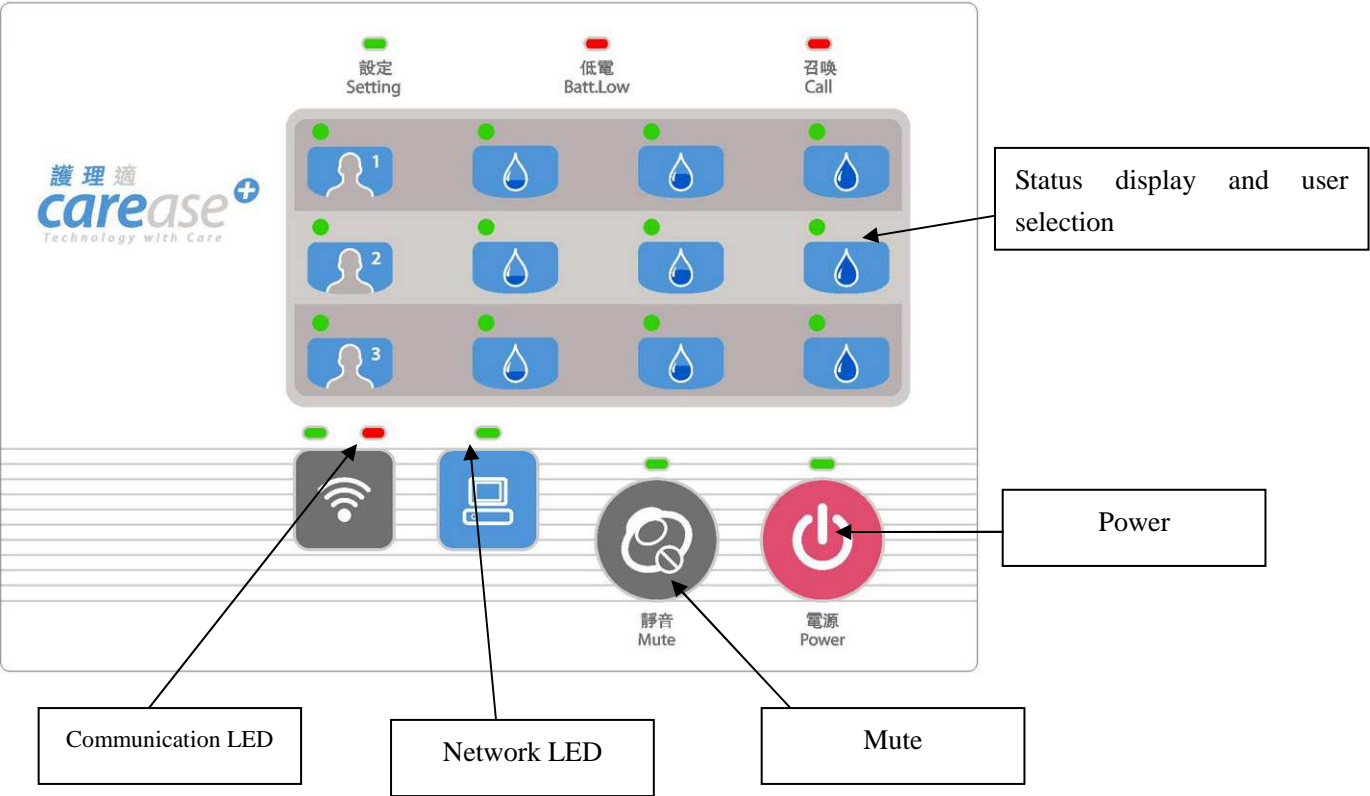
1. Diaper wetness
- 3 wetness levels – Wet, Damp and Moist.
- The sensitivity of different wetness levels may be configured.
- The buzzer may be turned on/off.
- Indications of status:

Status	Indications
Sensor unclipped / wrongly clipped	User indicator: Blinks; Buzzer: Beep-beep.
Sensor battery low	User indicator: Blinks; Low battery indicator: On; Buzzer: Beeps continuously after clipping on the diapers.
Sensor clipped	User indicator: On.
Moist	Moist indicator: Blinks slowly.
Damp	Damp indicator: Blinks.
Wet	Wet indicator: Blinks quickly; Buzzer: Beeps continuously.

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- Sensor setting

To enter the code-matching mode, place the sensor on top of R-138a as the figure.

- If all user indicator LEDs are on, the sensor is new, unused. Whereas if a specific user indicator LED is on, the sensor is assigned to the corresponding user.

- Press the corresponding user key to assign the sensor to the user.

- Wetness display shows 3 wetness levels. Moist: 150ml; Damp: 250ml; Wet: 350ml. Press the buttons to change the volume of liquid for the "wet" level.

- The "Mute" indicator LED indicates whether the buzzer is muted or not.

- The code-matching mode will be automatically exited if no action is taken for 5 seconds.

Communication Status Display

⬜ Network LED	Explanation
Off	No signal from the root for 3 mins.
On	Root online.

📶 Communication LEDs	Explanation
Off	No data transmission.
Green LED blinks	Data transmission – such as receiving sensor signals, signal repeating, or sending signals to other devices.
Red LED blinks	Data transmission failure.

- To send a test signal to Wetness Care system, press the ⬜ button.

Power control and Battery replacement
- The power indicator LED is on when the power is on.
- Low battery: When the battery voltage is lower than 3.4V, the low battery indicator LED blinks. When it is lower than 3.2V, R-135c will be powered off.
- Power off R-135c before replacing the battery. The device will enter stand-by mode and save the last status. The last status can be restored after battery replacement.
- To turn R-135c on/off, press ⏻ the "Power" button for 2 seconds.

2. Wetness adjustment
   - After 2 hours of "Damp", R-138a will adjust the wet level to "Wet".

3. Software configuration parameters
   - Communication path: Serial, max. 15 devices.
   - 6 levels of wetness.
   - Sensor code-matching table.

4. Network setup
- Configurable wireless transmission power.
- Max. 13 levels of signal repeating (14 Wetness displays/Networking devices with a root device connecting to the computer).
- Unlimited number of tree branches.
- Signal strength examination of neighbors for easy network optimization.

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Statement according to FCC part 15.105:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-- Reorient or relocate the receiving antenna.

-- Increase the separation between the equipment and receiver.

-- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-- Consult the dealer or an experienced radio/TV technician for help.

Statement according to FCC part 15.21:

FCC Caution: Any changes or modifications not expressly approved by the party responsible could void the user's authority to operate this device.