MI-2531

Indoor main unit of Full Weather Station

Rev (0) Dated 16/8/05

1. INTRODUCTION

Remote Full weather station is composed of MI2527, MI2528, MI2529, MI2530 and MI2531.

- -MI2527 is outdoor temperature and humidity remote transmitter.
- -MI2528 is outdoor rain gauge remote transmitter.
- -MI2529 is outdoor wind speed and wind direction remote transmitter.
- -MI2530 is outdoor temperature, humidity and RCC(radio control clock) remote transmitter.
- -MI2531 is indoor main unit.

Caution: The user is cautioned that changes and modifications made to the equipment without the approval of manufacturer could void the user's authority to operate this equipment.

Notes: 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.

FCC Warning:

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.

2. FEATURES

- 1) Remote receiver
- 2) Indoor temperature
- 3) Indoor humidity
- 4) Air pressure
- 5) Weather forecast
- 6) Radio control clock with calendar and moon face
- 7) Wind chill calculate
- 8) Heat index calculate
- 9) Dew point calculate
- 10) Time alarm, temperature alarm (outdoor & indoor), humidity alarm (outdoor & indoor), wind speed alarm, storm alarm, Rain fall alarm, wind chill alarm, heat index alarm, dew point alarm.

11) Total 8 key:

MAX(+), MIN(-), DISPLAY(RECORD), CLEAR(EXIT), SETUP(ON/OFF/PRESSURE)
ALARM, CHANNEL(WAVE), SNOOZE

3. FUNCTION DESCRIPTION

3-1. POWER ON or RESET

When Power on or reset the LCD will full display for 5 seconds, the main unit will measure indoor temperature, indoor humidity and air pressure during this 5 seconds, then it will show the temperature, humidity value and time (default is 01/01-2005,12:00AM at EST time zone) on LCD, all of the outdoor value will be shown ---, forecast area will show cloud with blinking, pressure bar area will be clear, pressure area will show "0 METER" with METER icon blinking, it ask user to input the altitude of the station, you can press (+) or (-) key to select METER or FEET unit, then press SETUP key to set the altitude (the METER or FEET icon will become static and the "0" digit will blink), press (+) or (-) to increase or decrease the altitude with 10meter(or feet) per step, the range is from -100 to 2500 meter (or from -330 to 8250 feet). After setting the altitude, press SETUP key to confirm and go into weather setting(or press CLEAR to quit the initial setting with the cloudy weather), press (+) or (-) to set the current weather, then press CLEAR to quit the initial setting. If no key was pressed for 30 seconds, it will quit initial setting automatically with the status shown on the LCD.

When completed the initial setting, it will begin to search the RF433 signal from outdoor transmitter. When turn on the rf433 module, the antenna icon will be waving to indicate signal is being picked up. When a certain signal is picked up and decoded successfully, it will be shown on LCD, and the main unit will turn off the rf433 module for 3 seconds, then to pick up next signal, the search time is maximum 6 minutes. When maximum 5 different signal is searched, it will quit search mode and go into normal mode. If the RCC signal had been received and decoded successfully, the antenna icon will be full display and the OK and WAVE icon will be light up. If no RCC signal is detected, the antenna icon will be blinking, WAVE and OK icon is disappeared. If any RCC signal had been detected (but no all), the antenna icon will be blinking, the WAVE icon is light up but the OK icon is disappeared. During the signal picked up period, the antenna icon will change to waving form.

The HEAT INDEX will be calculated from the temperature and humidity value in MI2530.

The WIND CHILL will be calculated from the temperature value in MI2530 and the wind speed value in MI2529.

The DEW POINT will be calculated from the temperature value in MI2530.

3-2. REVIEW THE MESSAGE

3-2-1 In normal mode, press DISPLAY to view and toggle the display in cycle:

WIND CHILL → HEAT INDEX → DEW POINT → (if rain gauge is added) Rain in last hour

Total rain since last "clear" ← Rain in user defined days ← Rain in last 24 hours

- At the total rain status, press & hold the CLEAR key for 3 seconds can clear the total rain record.

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3-2-2 In normal mode, press MAX (or MIN) button will show the maximum (or minimum) value of the past 24 hours on LCD.

While in the MAX (or MIN) mode, press RECORD button to view the time when the maximum (or minimum) value occurred in cycle: (the value and the time will be blinking)

Outdoor temperature \rightarrow outdoor humidity \rightarrow indoor temperature \rightarrow indoor humidity \rightarrow wind speed

Air pressure ← WIND CHILL (the current content on the LCD, see 3-2-1)

- You can press CHANNEL button to change the different outdoor maximum (or minimum) value of temperature and humidity (if other outdoor temperature & humidity sensor is added).
- In the record mode, press CLEAR button to clear the record individually.
- Press MAX (or MIN) again can quit the MAX (or MIN) mode.
- No button was pressed for 15 seconds, the unit will change into normal mode.
- **3-2-3** In normal mode, press SETUP button once to review the air pressure history.

While in air pressure history mode, press (+) or (-) to review the past 19 hours record of air pressure in cycle.

Press CLEAR button to exit out of the pressure history mode.

3-2-4 In normal mode, press CHANNEL button once to view the other outdoor temperature and humidity in cycle (maximum 3 outdoor temperature and humidity sensor can be added).

3-3. SETUP OPERATION

3-3-1 Setup step

In normal mode, press & hold the SETUP button for 3 seconds to go into setup mode

Press (+) or (-) to change the value, press & hold (+) or (-) 3 seconds for rapid change

Press SETUP button to confirm and go to set next value

- the setting value is blinking
- Press CLEAR button to store the current setting and exit out of the setup mode.
- NO key was pressed for 15 seconds will store the current setting and exit out of the setup mode automatically.

3-3-2 Setup cycle

hour → minute → month → date → year → 12/24 hour → time zone → DST ON/OFF

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3-3-3 Default setup value

Default time is 12:00 AM at EST time zone in 12-hours mode.

Default calendar is 01/01-2005, DST is ON.

Default temperature scale is F degree.

Default wind speed unit is mph.

Default wind speed average time is 6 minutes.

Default Rain gauge unit is INCH.

Default Rainfall collection days is 14 days.

Default air pressure unit is mbar/hPa.

3-4. ALARM SETTING

3-4-1 Setting step

Press ALARM button for 3 seconds to go into alarm setting mode

Press (+) or (-) to change the alarm value, press & hold (+) or (-) 3 seconds for rapid change

Press SETUP(ON/OFF) to enable or disable the current alarm

Press ALARM button to confirm and go to set next alarm value.

- the setting value is blinking
- Press CLEAR button to store the current setting and exit out of the alarm setting mode.
- NO key was pressed for 15 seconds will store the current setting and exit out of the alarm setting mode automatically.

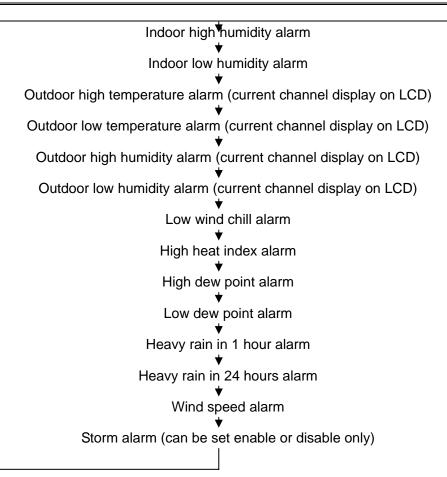
3-4-2 Setting cycle

time alarm (hour → minute)

Indoor high temperature alarm

Indoor low temperature alarm

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3-4-3 Default alarm setting

- All of the above alarm is disabled in default status.
- Alarm time is 12:00 AM, the other alarm value are zero.

3-4-4 alarm function

When any alarm is activated, an audible tone will be generated by the main unit. The audible tone
will be continued for 1 minute if no key was pressed. You can press ALARM button to turn off the
alarm audio for 24 hours, or press SNOOZE button to turn off the alarm audio temporarily for 5
minutes.

3-5. OTHER OPERATION

- In normal mode, press SNOOZE button to light up the LED backlight for 5 seconds.
- Press & hold the WAVE button will force the main unit into signal searching mode, the searching time is maximum 6 minutes (refer 3-1 power on or reset).