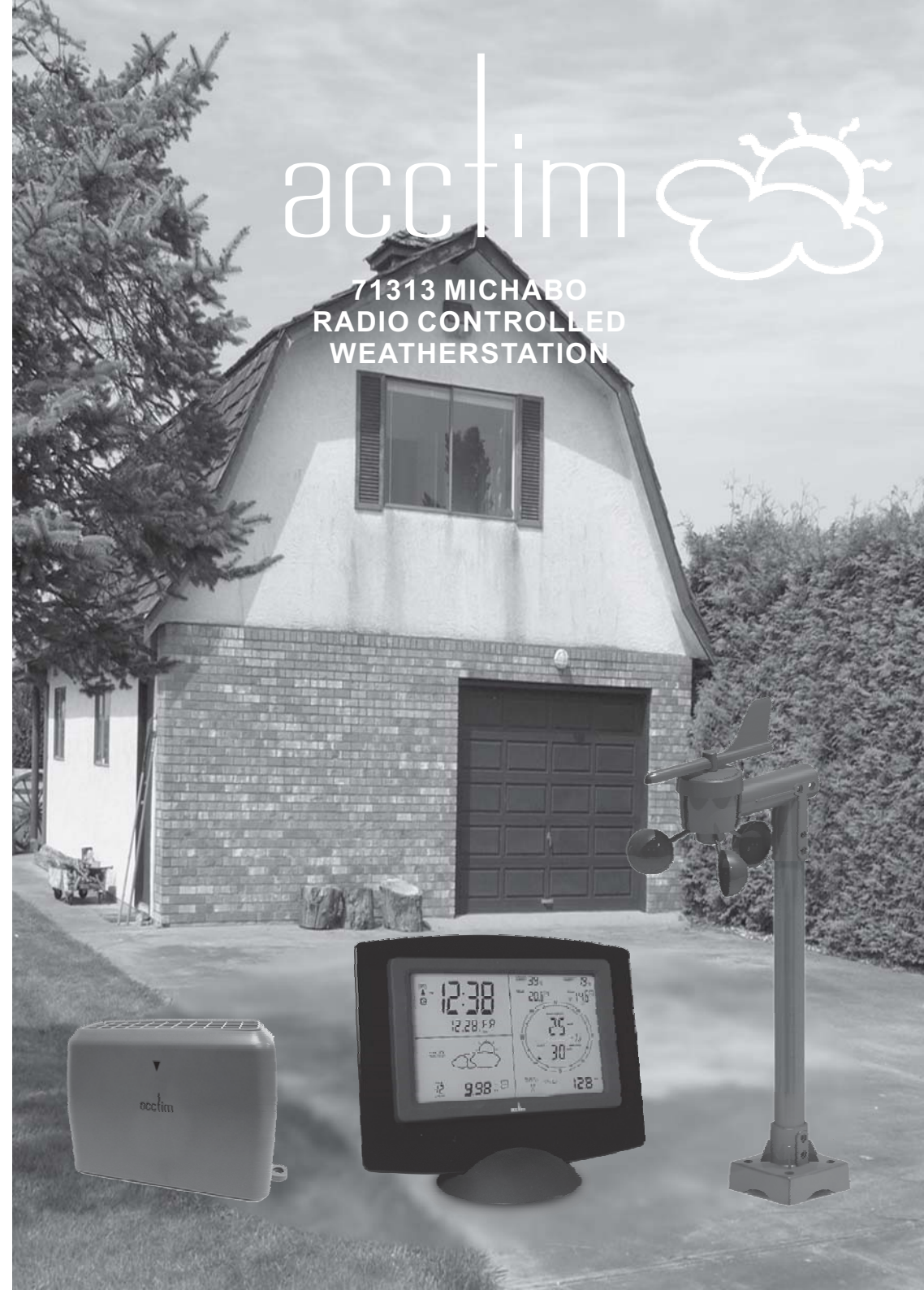


acctim

71313 MICHABO
RADIO CONTROLLED
WEATHERSTATION



71313 Technical Specifications:

BASE STATION		SENSOR UNIT 1:	
Dimensions (W x H x D)	190 x 150 x 30 mm	REMOTE WIND SENSOR UNIT	
With base stand	190 x 168.8 x 81.2 mm	Dimensions	152.0 x 417.6 x 213.56 mm
Weight	270g (0.54lbs) without battery	(W x H x D)	(6.06 x 12.4 x 8.4 inches)
Battery main unit	3 x UM-3 (AA) 1.5V batteries (not included)	Wind speed range	0-160 KM/h (0-100mph)
INDOOR BAROMETER		Wind speed unit	kmh, mph, knots
Barometer unit	mb/hPa, inHg	Wind direction	16 Positions
Measuring range	800 – 1050mb/hPa	Wind Gust Record	See page 12 for details
Accuracy	+/- 5 mb/hPa	Wind chill tempearture record	See page 12 for details
Resolution	1 mb (0.01 inHg)	Max/Min wind speed record / Trend	
Weather display	Sunny, Partly Cloudy, Cloudy, Rainy and Snowy	Wind speed record transmission	Approx every 73 sec
Memory	Historical data for last 19hrs / Trend	Power:	By the Transimission box
INDOOR TEMPERATURE		OUTDOOR TEMPERATURE (Transmission box)	
Temp. unit	°C / °F	Dimensions	75.0 x 74.3 x 163.6 mm
Displayed range	0°C to 50°C (32°F to 122°F)	(L x W x H)	(2.95 x 2.92 x 6.44 inches)
Operating range	0°C to 50°C (32°F to 122°F)	Temp. unit	°C / °F
Accuracy	+/- 1°C (+/- 2.0°F)	Displayed range	-20°C to 70°C (-4°F to 158°F)
Memory	Current, min and max.	Operating range	-20°C to 70°C (-4°F to 158°F)
INDOOR HUMIDITY		Accuracy	-20°C - 0°C +/-2°C (+/-4°F)
Range	20 to 90% Relative Humidity		0°C - 40°C +/-1°C (+/-2°F)
Resolution	1%		40°C - 70°C +/-2°C (+/-4°F)
Humidity accuracy	+/- 5%	Memory	Current, Min and Max Temp.
Memory	Current, min and max.	Freeze Alert (Per Channel)	4°C or Below
RADIO-CONTROLLED / ATOMIC CLOCK		Power:	2 x UM-3 (AA) 1.5V batteries (not included)
RC Clock update	Auto	SENSOR UNIT 2:	
Clock display	HH:MM	REMOTE RAIN GAUGE	
Hour format	12hr AM/PM or 24hr	Dimensions	156.4 x 94.5 x 60 mm
		(W x H x D)	(6.16 x 3.71 x 2.36 inches)
Calendar	DD/MM or MM/DD & Day	Weight	206g (0.3lbs) without battery
Weekday in 5 lang	English, French, Germany, Italy and Spanish	Rainfall unit	mm, inch
		Range	0-999.9mm (self emptying)
		Resolution of each count	0.05mm
		Memory	Accumulated from last memory reset
		Battery	2 x UM-3 (AA) 1.5V batteries (not included)
DAILY ALARM		SENSOR UNIT 3:	
Number Of Alarm	2	REMOTE TEMPERATURE & HUMIDITY (OPTIONAL)	
Snooze Function	8 Minute	Dimensions	40 x 79.5 x 20mm
		(W x H x D)	(1.57 x 3.13 x 0.79 inches)
		Weight	60g (0.13 lbs) without battery
		Temperature Displayed Range	-20°C to 70°C (-4°F to 158°F)
		Operating Range	-20°C to 70°C (-4°F to 158°F)
		Accuracy	+/-1°C (+/-2°F)
		Humidity Displayed Range	20% to 90% Relative Humidity
		Accuracy	+/- 5%
		Power	2 x AAA batteries (not included)
Gift box dimensions:		RF TRANSMISSION	
(W x H x D)	325 x 395 x 128 mm (12.80 x 15.55 x 5.04 inches)	RF frequency	433Mhz
Gross Weight	2.1 Kg (4.62 lbs)	Range	40 meters with no obstructions
		Transmission	Approx. every 73 second

INSTRUCTION MANUAL

CHANGING THE BATTERIES

It is recommended that you replace the batteries annually even if the weatherstation is still running.

Do not mix new and used batteries, different types of brands

We recommend you use "AA" 1.5V Alkaline batteries and if you are consistently experiencing temperatures lower than -17°C / 1.4°F we recommend that you use lithium batteries as these will extend the battery life.

Please dispose of the batteries in a responsible manner.

WARNING: Batteries or batteries installed should not be exposed to excessive heat such as sunshine, fire etc ...

MAINTENANCE

A soft cloth may be used to clean your clock. Do not use corrosive cleaner or chemical solution on the clock.

Keep the Main Unit clean and dry to avoid any problems.

YOUR GUARANTEE

Your clock is guaranteed for 12 months from the date of purchase against any faults arising from defective materials or manufacture. Damage caused through careless handling, misuse or in transit is expressly excluded. Should this clock fail within 12 months please return it in the first instance to your retailer.

Environmental Protection



Disposal of electrical & electronic equipment

Do not dispose of this product with household waste. For the proper treatment, recovery and recycling please take this product to the appropriate collection point. If you are unsure of where this is contact your local authority. Improper disposal may be harmful to the environment.

Safety Note:

Damage caused by failure to comply with this instruction manual will invalidate any warranty. The manufacturer and supplier will not be held liable for any damages due to failure to comply.

In case of harm or damage to a person or property caused by improper handling or failure to comply with this instruction manual, the manufacturer and supplier cannot be held liable.

For reason of safety and operation, alteration to this device is strictly prohibited.

This product is not a toy. Keep out of the reach of children.

This is a home product and is not to be used for medical purposes or for public information.

Any modification or alteration to this product will invalidate the warranty and any liability.

ABOUT THIS MANUAL: Congratulations on selecting this personal weatherstation clock. The instruction manual will give you a full overview of the product and will guide you step-by-step through the system set-up, testing and installation. We hope you will enjoy the benefits of the weather readings and the precise Radio Controlled clock. Please read this instruction manual carefully and keep it in a safe place future reference.

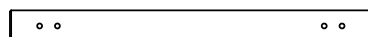
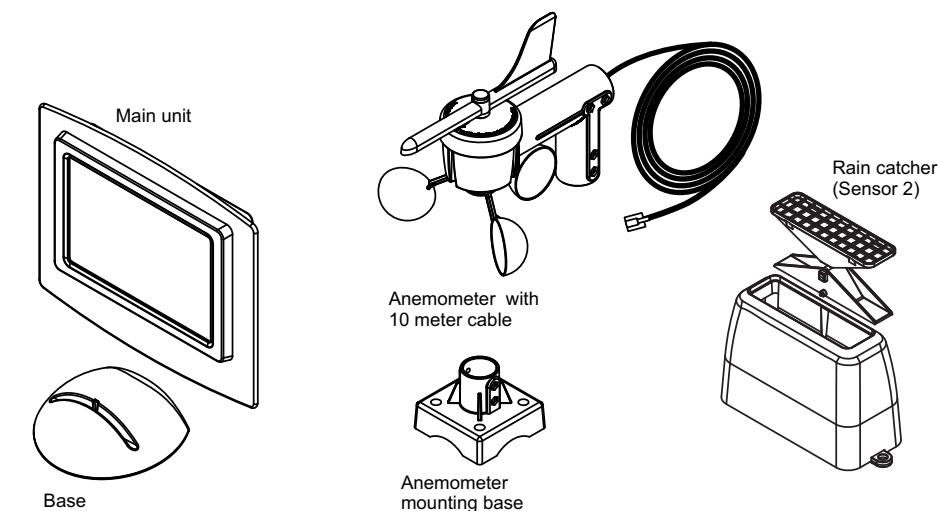
Your weatherstation is manufactured with the latest sensor and wireless technology and has been carefully designed using state of the art microprocessor electronic circuitry. The weather data readout is accurate to the vicinity of your property and when properly installed it will give you an accurate and reliable service.

If you have any difficulties or problems during installation, please call our Customer Helpline on 01908 220020 or Local 0845 1207208 Mon – Fri 9am-4.30pm. Email: service@acctim.com or visit www.acctim.com

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PACKAGE CONTENT

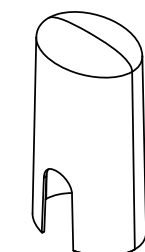
Before installing the weatherstation please check that you have all of the following items.



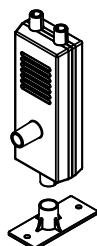
Anemometer
mounting pole

(At bottom
of the crate)

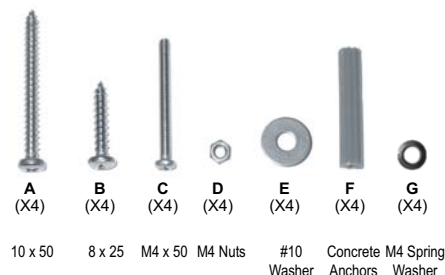
Outdoor sensor 1
& battery box



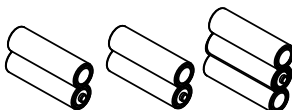
Weather Cover



Vertical/Horizontal
surface mounting



You will need 7 X AA 1.5V Alkaline batteries (not included), a Pozidrive screwdriver and a compass.



Problem

Wind/Rain Sensor has frozen

Solution

The wind and rain sensors are designed to work above 0 degrees, please move them to a safe location to avoid permanent damage to the unit.

Problem

The outdoor sensor 1 signal indicator is on the display, it is windy but there is no change in the Wind Speed reading.
Note: The wind measurement is accumulated by the average speed of the previous minute, so it will show the average wind speed on the next transmission, if the average wind speed is below 1Km/hr, then there will not be a record.

Solution

Press the 'Channel' button to force the main unit to search for the signal again

Check the batteries are correctly inserted into the sensors

Remove and reinsert the batteries into the sensor

Reset the main unit

Check the Anemometer is assembled correctly. Check the installation diagram on page 6 & 7.

Check the location of the main unit - is it in too sheltered area

Check that the Anemometer is connected to the battery box.

Check the connecting 10meter cable

Unscrew the top of the anemometer and check the cable connection

Move the sensor closer to the main unit

Replace the batteries

Test the anemometer by manually spinning the cups – Now wait to see if the main unit receives the transmitted data.

Question

The wind gust & wind chill is displaying "--", is this correct?

Answer

If the wind speed is consistent there will be no wind gust reading and the main unit will display "--". The main unit will show a wind chill reading if the temperature is 10°C or below and the wind speed is above 5km/h. Please see page 12 for more information.

Problem

The outdoor temperature is not showing

Solution

Check to see if the main unit has received the outdoor sensor 1 signal – the indicator should appear on the display

Press the "Channel" button to force the main unit to search for the signal again

Check the batteries are correctly inserted into the sensors

Remove and reinsert the batteries into the sensor

Reset the main unit

Check the distance between the sensors and the main unit. The transmission range should be 40meters from the sensor to the main unit in line of sight, providing there are not any obstacles (note; brick walls etc. will reduce the transmission).

Check to see if there are any obstacles that might reduce signal strength

Move the sensors or main unit so they are closer together

Replace all the batteries

Question

The outdoor humidity is displaying "- -", is this correct ?

Answer & Solution.

In addition to the remote wind/temperature sensor 1 and rain catcher 2, the main unit can receive data from two optional outdoor temperature sensor units. The optional sensor/s measures outdoor temperature & humidity.

The outdoor humidity function will not work and the LCD display will show "- -" without the optional sensor.

To purchase the optional sensors, please contact customer services as listed on page 1.

Problem

The air pressure trend shows steady when the barometer reading has changed.

Answer

The main unit will compare the current reading to the average reading of the previous hour. The trend icon will change if the current reading has increased/decreased 2mb or more - see page 14.

The normal function of the product may be disturbed by Strong Magnetic Interference. If so, simply reset the product to resume normal operation by following the instruction manual. If the product cannot resume normal operation, please move to another location.

If you have any queries, problems or do not understand any part of these instructions please contact:

Customer Help Line 01908 220020 or Local 0845 1207208 Mon – Fri 9am-4.30pm
email for service: service@acctim.com or visit www.acctim.com

PROBLEMS & SOLUTIONS

Problem

The clock will not receive Radio Controlled signal and will not set to the correct time.

Solution

Manually force Time Signal search

Reset the clock

Manual set & press and hold the wave button for 3 seconds.

Try to rotate the main unit through 90 degrees.

Move the clock to another location.

Do not place near a computer monitor, electric motors, TV, Telephones etc.

Check the batteries are new and in good condition.

Problem

The clock loses time/does not show the correct time

Solution

Manually force signal search

Reset the clock

Move clock to new location

Check the batteries are new and in good condition

Check to see if the clock is set to a different time zone see page 16 "To set foreign time zone"

Problem

What do I need to do when the clocks change for summer/winter time?

Solution

Nothing! The clock will automatically switch to the correct time when the signal is received.

Question

Do all the weather forecast icons flash apart from "Sunny"?

Answer

This is correct

Questions

Can I reset the barometer altitude level?

Answer

The Weatherstation is reading at a consistent altitude to provide more accurate readings and the altitude Level is preset at sea altitude and cannot be adjusted manually.

Problem

The main unit will not pick up the signal for sensor 1 & 2 and the signal indicators disappear from the display.

Solution

Press the "Channel" button to force the main unit to search for the signals again

Check the distance between the sensors and the main unit. The transmission range should be 40meters from the sensor to the main unit in line of sight, providing there are not any obstacles (note; brick walls etc. will reduce the transmission.

Check the batteries are correctly inserted into the sensors

Move the sensors or main unit so they are closer together

Reset the main unit

Move the main unit to a new location

Replace all the batteries

Problem

The rain catchers signal indicator is permanently on, it is raining but there is no reading.

Note: The resolution of each count is 0.05mm if the catcher did not catch enough rain to trigger the sensor there will be no reading and the display will show "- -".

Solution

Press the 'Channel' button to force the main unit to search for the signal again

Check the batteries are correctly inserted into the sensors

Remove and reinsert the batteries into the sensor

Reset the main unit

Check the rain catcher is level

Check the rain catcher has not frozen

Check that the rain catcher is assembled correctly. Check the installation diagram on page 6 & 7

Replace all the batteries

Test the rain catcher by pouring water through the 'Dirt griddle' – check to see if you can hear the 'Auto drainer' is tipping from side to side. Now wait to see if the main unit receives the transmitted data.

FEATURES

The data from the remote outdoor sensor/s is transmitted via. 433 MHz signal approximately every 73 seconds over a range of 40 meters to bring you the latest weather information. The data is displayed on the LCD panel on the main unit in both digital and analogue format.

The Anemometer calculates the wind speed/direction/gust & chill factor readings and is connected to the battery box, which incorporates the outdoor temperature sensor 1. The rain catcher sensor 2, measures rain rate and cumulative rainfall. In addition to the remote wind/temperature sensor 1 and rain catcher 2, the main unit can receive data from two optional outdoor temperature sensor units. The optional sensor/s measures outdoor temperature & humidity. To purchase the optional sensors, please contact customer services as listed on page 1.

Note: The outdoor humidity function will not work and the LCD display will show "- -" without the optional sensor.

Your weathermaster is complete with the following features: -

Time:

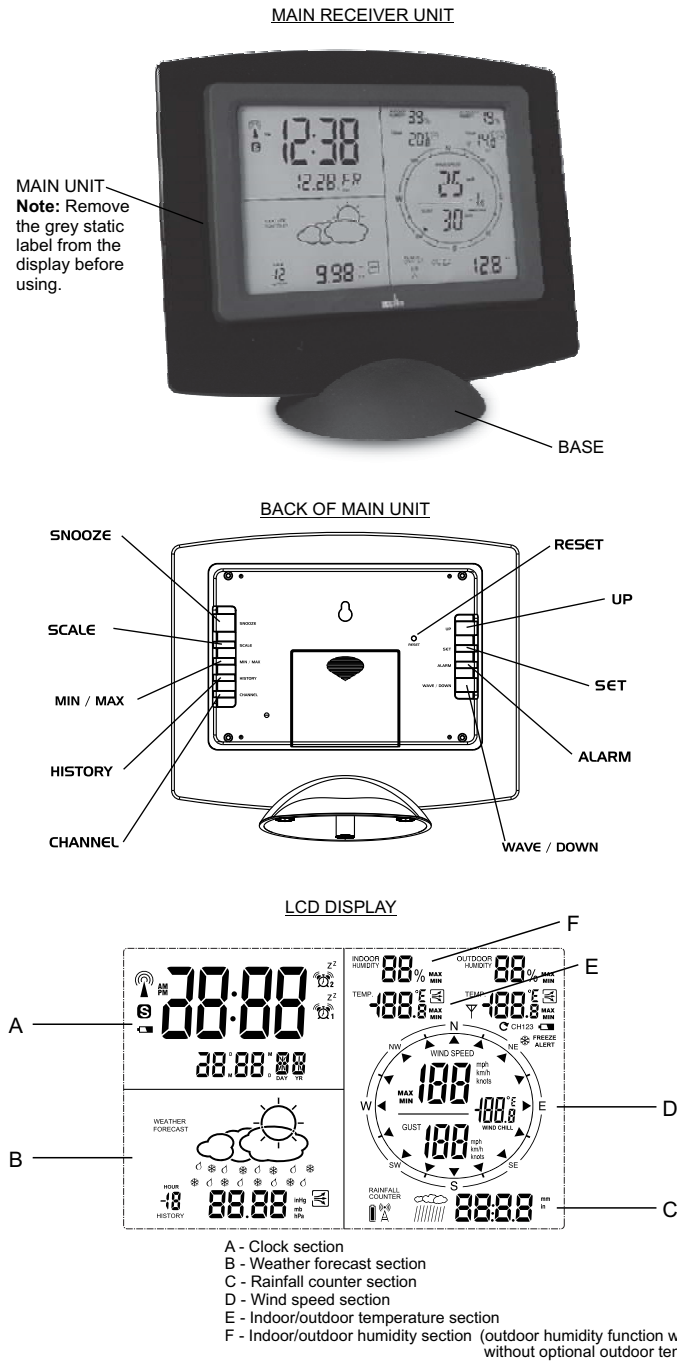
- Radio Controlled - fully automatic time set-up
- Automatically adjusts to Summer/Winter time changes
- Foreign time zones selectable (-12 to +12 hours)
- Calendar displays Month/Day/Date
- Weekdays in five languages, select between English, French, German, Italian & Spanish.
- 12/24 hour format
- Daily alarm (alarm 1 & 2)
- Snooze
- Summer time indicator
- Battery low indicator

Weather Features

- Electronic weather forecasting predicts the weather for the next 24 hours
- Animated weather Icons (Sunny, Partly Cloudy, Cloudy, Rain and Snow)
- Atmospheric pressure, switch between mb/hPa & InHg
- Air pressure history over 19 hours
- Indoor temperature display, switch between °C & °F
- Indoor Humidity display, showing RH%
- Outdoor temperature display, switch between °C & °F
- Minimum & maximum indoor/outdoor humidity record
- Minimum & maximum temperature record with trends
- Measures & displays wind speed/gust in kmh, mph, or knots
- Wind chill temperature record
- Measures & displays cumulative rainfall counter in mm or inches.
- Animated icons displaying the rain status
- Ice warning alert for when the temperature is approaching freezing

SYSTEM DESCRIPTION –

Do not install the batteries until all the components are set-up and ready for testing.



TROUBLE SHOOTING AND RADIO CONTROLLED TECHNOLOGY EXPLAINED

The Radio Controlled clock will start to search for the time signal When:

- The batteries are inserted into the main unit.
- The clock has been reset (reset clock).
- The WAVE button is pressed (manual Set).

Normal Status:

The weatherstation will search for the time signal at the first 10 minutes of each hour until the time signal is received. The clock will then search for the time signal for the first 10 minutes of each hour 2,3,4, & 5am every day. If the clock receives the time signal at 2am it will not need to search for the time signal at 3am or 4am.

If the time signal is received, the time signal antennae (📶) will remain on the display.

If the weatherstation does not receive the time signal during initial set-up or at the change of Summer/Winter time you can manually set the time.

To manually set the clock

Note: The clock can only be set manually if the time signal is not received.

In Normal Mode:

- Press and hold the SET button for 3 seconds and the hour digit will start to flash.
- Press the UP or DOWN button to select 12 or 24hour format.
- Immediately:**
- Press the SET button again and the hour will start to flash.
- Press the UP or DOWN button to set the desired hour.
- **Note:** In the 12hr format the “AM” & “PM” icons will display. The “AM” & “PM” will not display in the 24hr format.
- Press the SET button again and the minutes will start to flash.
- Press the UP or DOWN button to set the desired minute.
- Press the SET button again and the M & D icons will start to flash.
- Press the UP & DOWN button change the position of the month & date.
- Press the SET button again and the year will start to flash.
- Press the UP or DOWN button to set the year.
- Press the SET button again and the month will start to flash.
- Press the UP or DOWN button to set the month.
- Press the SET button again and the date will start to flash.
- Press the UP or DOWN button to set the date.
- Press the SET key again and the language of the week will start to flash.
- Press the UP or DOWN button to set the language for the day of the week.
e.g. EN = English, GE = German, FR = French, IT = Italian, and SP= Spanish.
- Press the SET button once again to exit.
- Press and hold the WAVE button for 3 seconds to manually force the clock to search for the Time signal for 10 minutes.

The clock will now automatically attempt to search for the time signal for the first 10 minutes at the following times 2,3,4 & 5am...(the time signal antennae will flash). When successful, the received time will override the Manual Set time.

To stop manual force time signal search.

- Press the WAVE button once again while the main unit is in search mode and the time signal antenna will stop flashing.

Like any radio receiver your clock needs a good signal to work properly. In some building types the signal may be weak during the day so if possible try to set the clock in the evening or overnight.

Note: Electrical appliances, tall buildings etc; may interfere with the Clocks receiver.

Note: For more information on the MSF Transmitter and Radio Controlled time keeping please visit www.npl.co.uk/time/msf

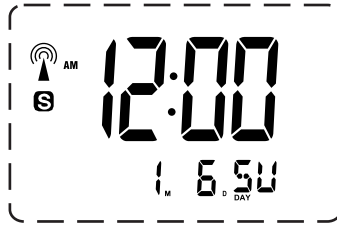
Important Note: The Anthorn Transmitter is periodically shut down for maintenance resulting in no signal being transmitted. For dates of the schedule maintenance visit www.npl.co.uk/time/msfoutages.html

To use the snooze function

- When the alarm sounds. The alarm icon (🔔) will flash.
 - Press the SNOOZE button to stop the alarm and the snooze icon will flash. The alarm will then sound again after 8 minutes. The snooze can be repeated over and over.
- Note:** If no button is pressed the alarm will sound for 60 seconds and then sound again at the same time the next day.

Summer Time icon

As your clock is Radio Controlled, it will automatically adjust to the Summer/Winter time changes. Summer time starts on the last Sunday in March and ends on the last Sunday in October. The summer time icon (S) will automatically appear on the display to indicate summer time.

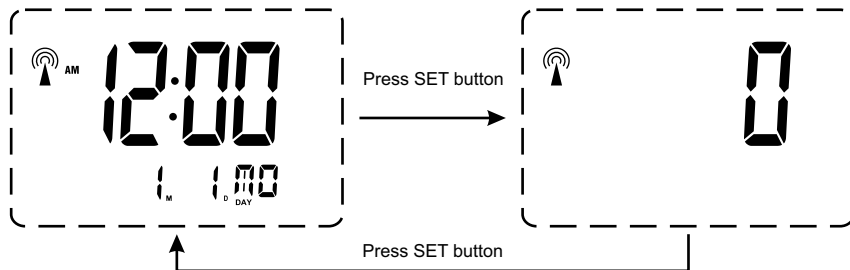


To set the foreign time zone

If you wish your clock to display a different time zone (e.g. your head office in America or relative in Australia), but to maintain the Radio Controlled accuracy then use the foreign time zone setting below.

In normal mode:

- Find out how many hours ahead/behind the time zone is.
- Press SET button once to enter foreign time zone setting. The hour adjustment time indicated "0", will start to flash.
- Press the UP or DOWN button to adjust to the correct hour for the time zone.
- Press the SET button once to exit and the time zone is set.
- Press and hold the "WAVE" button for 3 seconds.



For information on Foreign Time Zones please visit www.timeanddate.com/worldclock

To reset back to UK time

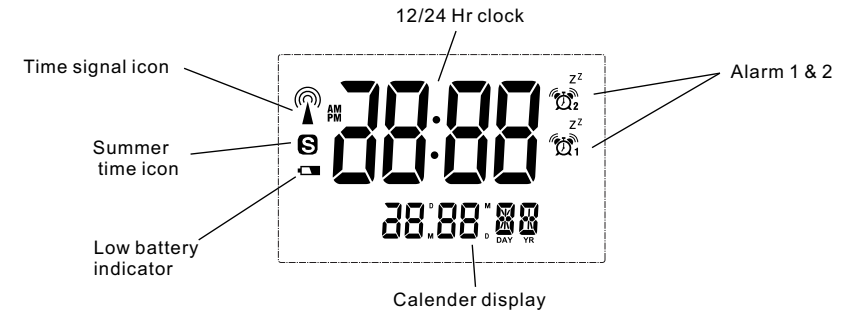
In normal mode

- Press SET button once to enter foreign time zone Setting. The hour adjustment time indicated, will start to flash.
- Press the UP or DOWN button to adjust to "0".
- Press the SET button to exit and the time zone is set.
- Press and hold the "WAVE" button for 3 seconds

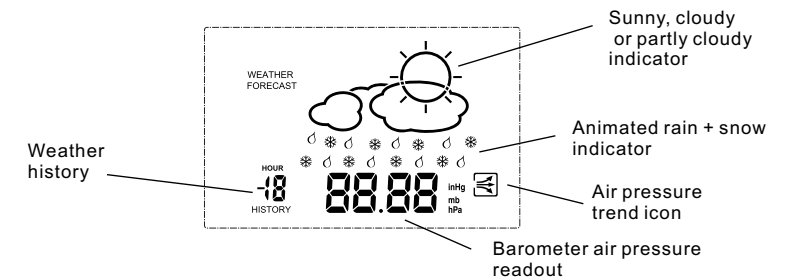
Note: The new time zone will not take effect until the Radio Controlled time signal is received.

Note: The clock is designed and tuned to receive the UK Radio Controlled time signal only. This feature will not work outside of the UK.

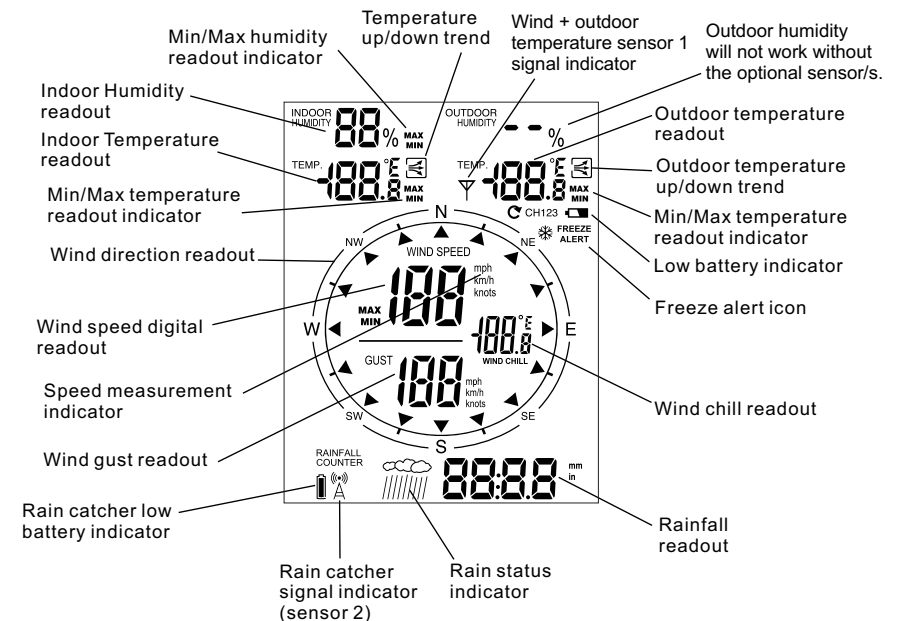
LCD PANEL SECTION A:



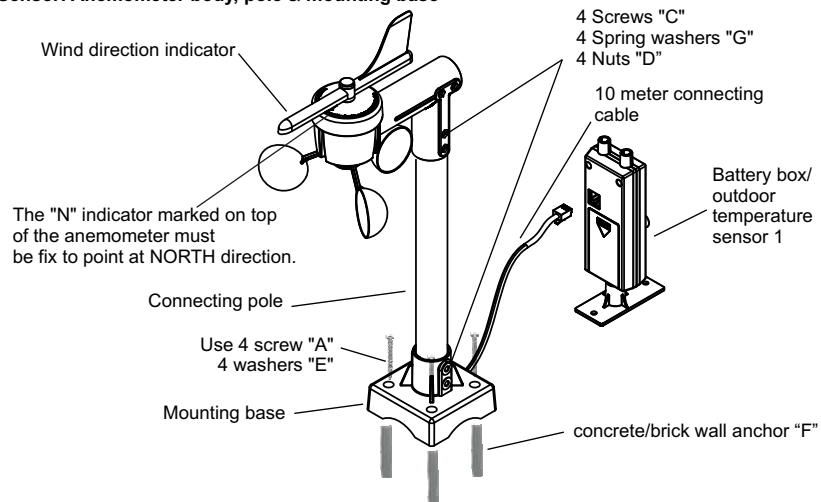
LCD PANEL SECTION B:



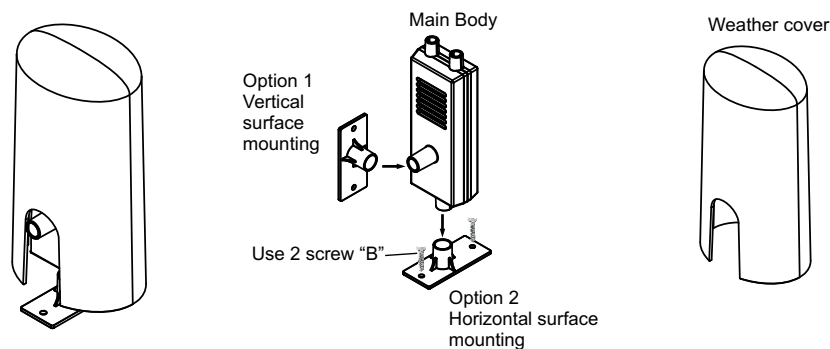
LCD PANEL SECTION C, D, E:



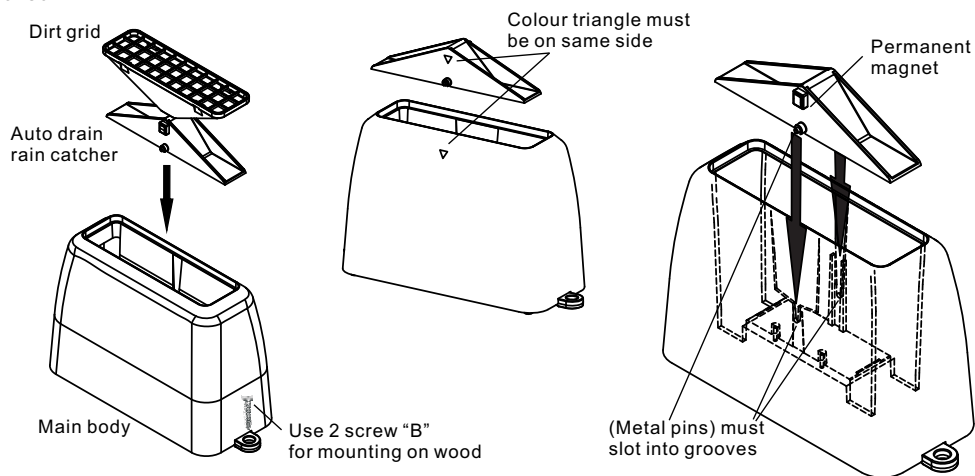
Wind Sensor: Anemometer body, pole & mounting base



Outdoor temperature/anemometer battery box



Rain catcher (Pluviometer) sensor 2



To set the alarm

In normal mode:

- Press the alarm button once. The alarm 1 (AL) indicator and the alarm 1 time will show on the display Immediately.
- Press and hold the SET button for 3 seconds and the hour will start to flash.
- Press the UP or DOWN button to set the desired hour.
- NOTE:** The AM or PM indicator will appear on the display in 12-hour format only.
- Press the SET button again. The minute will start to flash.
- Press the UP or DOWN button to set the desired minute.
- Press the SET button again to exit the alarm 1 setting mode. The alarm ON icon (🔔) will appear on the display.
- Press the alarm button again. The alarm 2 (AL) indicator and the alarm 2 time will appear on the display Immediately.
- Press and hold the SET button for 3 seconds and the hour will start to flash.
- Press the UP or DOWN button to set the desired hour.
- NOTE:** The AM or PM indicator will appear on the display for 12-hour format only.
- Press the SET button again and the minute will start to flash
- Press the UP or DOWN button to set the desired minute.
- Press SET button again to exit the alarm 2 setting mode. The alarm ON icon (🔔) will appear on the display.
- Press the alarm button again to exit the alarm mode.

Note: At any stage during the alarm setting the clock will return to normal time display after 10 seconds if no button is pressed.

To View the Alarm time 1 & 2

In normal mode:

- Press the ALARM button once to display the (AL1) alarm 1 time OR
- Press the ALARM button twice to display the Alarm 2 (AL2) time.

To turn ON/OFF alarm 1 & 2

In normal Mode:

- Press the ALARM button once. The alarm 1 (AL) indicator and the alarm 1 time will show on the display.
- Press the SET button once again to turn ON the alarm 1 and the alarm ON icon (🔔) will appear on the display.
- Press the SET button again to turn OFF the alarm 1 and the alarm ON icon (🔔) will disappear from the display.
- NOTE:** When alarm 1 (AL) is showing, by pressing the SET button you can turn ON/OFF the alarm.
- Press the ALARM button again. The alarm 2 (AL) indicator and the alarm 2 time will show on the display.
- Press the SET button once to turn ON the alarm 2. The alarm 2 ON icon (🔔) will appear on the display.
- NOTE:** When alarm 2 (AL) is showing, by pressing the SET button you can turn ON/OFF the alarm.

When the alarm is activated the alarm icon (🔔) will flash and the alarm will sound for 60 seconds. Press any button and the alarm will stop and sound again at the same time the next day. To turn OFF the alarm see section "To turn ON/OFF alarm 1 & 2".

Air pressure

The air pressure trend icon is used to show the recent air pressure trends compared to the last hour.

Rising	Steady	Falling

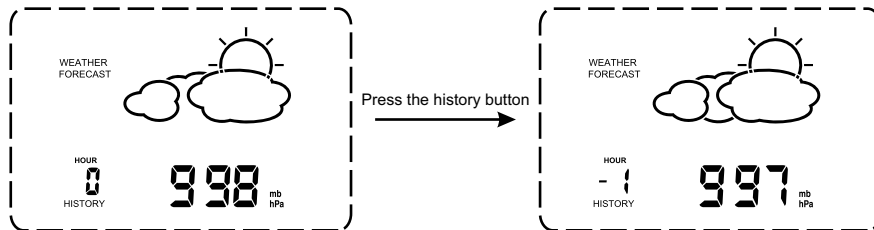
Air pressure changes with the weather. In fact, it's one of the most important factors that determines what the weather is like. High pressure is generally associated with good weather. Low pressure is generally associated with bad weather.

Note: The main unit will compare the current air pressure reading to average reading of the previous hour. The trend icon will change if the current reading has increased/decreased 2mb or more

To read the pressure history

The pressure history will display the air pressure for each hour over the last 19 hours.

- Press the history button to read the air pressure reading from the last 19 hours.



Note: After 5 seconds if no other buttons are pressed the unit will display the current air pressure data.

To read minimum/maximum memory

To view the memory for Indoor/outdoor temperature and wind speed readings.

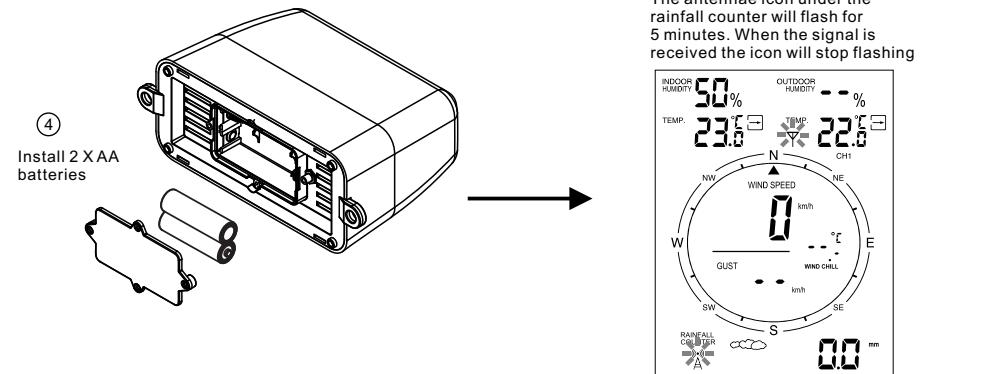
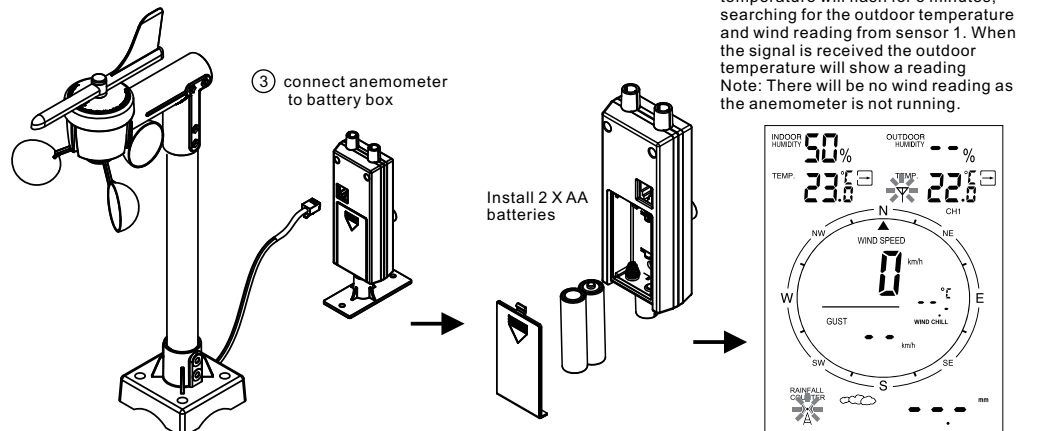
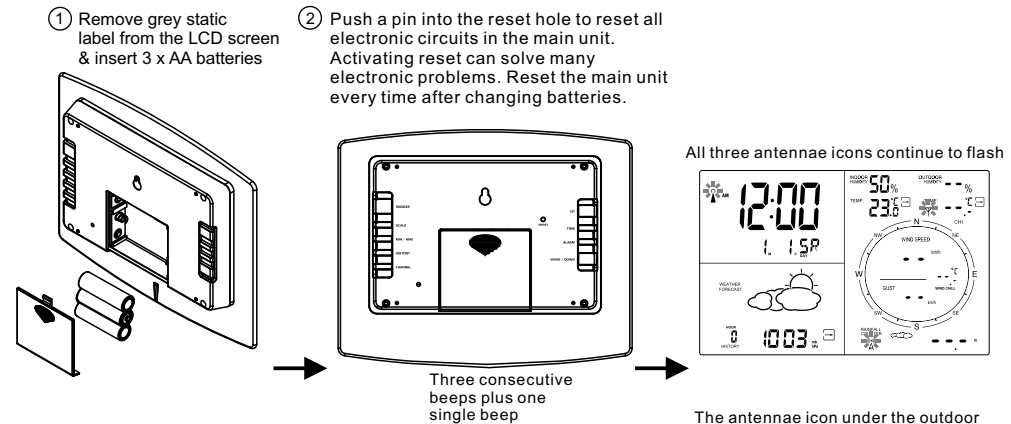
- Press the MIN/MAX button once to display the The maximum in/outdoor temperature. The maximum wind speed data.
- Press the MIN/MAX button again to display the The minimum in/outdoor temperature. The minimum wind speed data.
- Press the MIN/MAX button again to return to the normal mode.
- The unit will return to normal display after 5 seconds if no other button is pressed

To clear minimum & maximum memory

- Press the MIN/MAX button once the maximum memory will show on the display.
- Press and hold the MIN/MAX button for 2 seconds to clear the maximum memory data. The display will show " --- " under In/outdoor temp, wind speed for 2 seconds.
- Press the MIN/MAX button again. The minimum memory will show on the display.
- Press and hold the MIN/MAX button for 2 seconds to clear the minimum memory data. The display will show " --- " under in/outdoor temp, wind speed for 2 seconds and then return to the normal display.
- Press the MIN/MAX button again to return to the normal mode or the unit will return to the normal mode after 10 seconds if no other button is pressed.

ACTIVATION AND TESTING -

Before permanently mounting the weather station, it is important to make sure that the components work correctly at their chosen mounting or standing locations (for examples of suitable mounting locations please see the section "Installation" below). If there appears to be a problems with the 433MHz radio transmission and the weather readouts are not received, then these can mostly be overcome by moving the mounting locations or see section "Trouble shooting" for alternative actions.



INSTALLATION -

Note: Once you have verified that all of the components of the weatherstation are working, they can be installed in their permanent locations.

Positioning the main unit

Place the main unit indoors and away from any electrical equipment i.e. TV or computer.

ANEMOMETER/ BATTERY BOX – SENSOR 1

Choose a suitable location to mount the Anemometer, 10meter cable and battery box. The Anemometer is attached to the battery box – sensor 1. Via a 10meter cable.

Positioning the Anemometer

- Position the Anemometer at the most exposed location in your property e.g. above the roofline, between two houses or in back/front garden.
- There are several ways of mounting the Anemometer please refer to the examples below “**Horizontal surface & Vertical surface mounting**”.

Note: When choosing a suitable location, take in to consideration the length of the connecting cable (10meters) to the battery box – sensor 1 and the effective transmission range of the sensor -1 to the main unit (maximum 40 meters).

IMPORTANT

WIND DIRECTION - For an accurate reading, the anemometer must be mounted pointing NORTH (as indicated on the top surface of the anemometer), if the anemometer is not pointing NORTH then the reading will not be correct. Use a compass to locate North and mount the sensor accordingly.

Positioning the outdoor temperature battery box – sensor 1

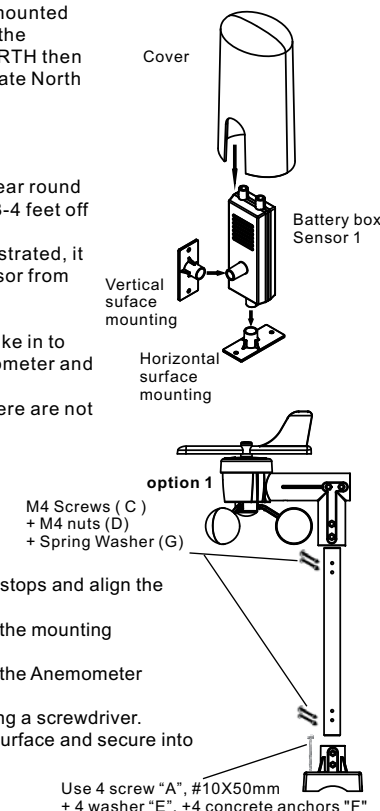
- The battery box must be positioned in an area that is shaded all year round and within easy reach for changing the batteries (approximately 3-4 feet off the ground).
- The box can be mounted on a vertical or horizontal surface as illustrated, it must however stand upright so that the cover can protect the sensor from rain.

Note: When choosing a suitable position for the battery box – sensor 1, take in to consideration the length of the connecting cable (10meters) to the Anemometer and the effective transmission range of 40meters from the main unit (providing there are not any Obstacles. e.g. walls).

Anemometer horizontal surface mounting -

As in diagram option 1

- Thread the 10meter cable back through the Anemometer body.
- Thread the cable through the pole and mounting base.
- Push the pole into the mounting base and Anemometer body, until it stops and align the holes.
- Insert 2 screws (C) with the spring washers (G) through the holes in the mounting base/pole.
- Insert 2 screws (C) with the spring washers (G) through the holes in the Anemometer body/pole.
- Place the nut (D) at the end of each screw and tighten the screw using a screwdriver.
- Position the Anemometer at the chosen mounting location on a flat surface and secure into place using 4 screw (A), 4 anchors (F) & 4 washers (E) provided.

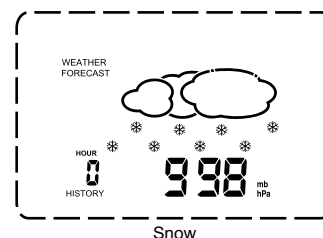
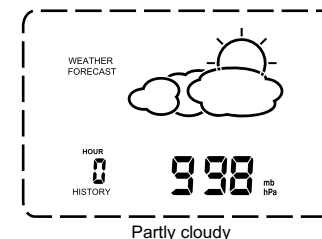
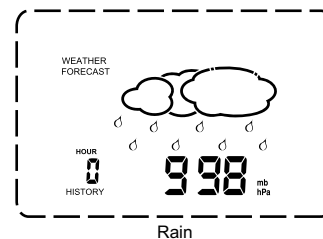
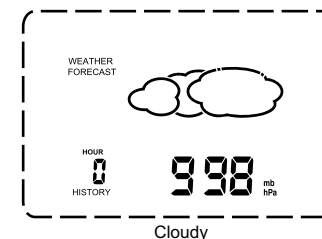
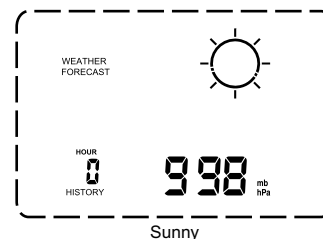


Weather forecast

A barometer is the device that measures the pressure of air pushing on it; this measurement is called the barometric pressure. The electronic weather forecast is based solely upon the change of air pressure over time and will predict the weather for the next 12 – 24hours and may not necessary reflect the current situation.

Measuring range of the barometer is 800 - 1050mb/hPa
940mb/hPa - would point to very stormy weather
1050mb/hPa - would point to very dry weather

Weather forecast icons below:



NOTE: Except for Sunny all the other weather forecast icon are animated

The Anemometer/outdoor thermometer battery box sensor 1

Outdoor thermometer specifications

- Outdoor temperature measuring range at -20°C to 70°C (-4°F to 158°F)
- The remote sensor 1 transmits the updated outdoor temperature every 73 seconds via 433MHz signal.
- Transmission range is up to 40 meters from the Main unit.
- Outdoor temperature operating range = -20°C to 70°C (-4°F to 158°F)

Anemometer specifications

- The Anemometer calculates wind/gust speed unit in kmh, mph or knot.
- Measures the wind direction
- The remote sensor 1 transmits the data every 73 seconds via 433MHz signal.
- Transmission range is up to 40 meters from the main unit.
- Wind/gust speed range 0-160 KM/h (0-100mph)

Wind speed

- This wind speed is an average speed calculated for the last minute.

Wind gust

- Wind gust is a sudden brief increase in wind speed in the last minute.
- If the wind speed is consistent there will be no wind gust reading and the main unit will show " - -".
- The main unit will display the wind gust reading, if the wind speed is at least 18mph or above and the variation in wind speed between the peaks and lulls is at least 10mph.

Wind Chill

- The wind chill temperature is how cold people and animals feel when outside. Wind chill is based on the rate of heat loss from exposed skin caused by wind and cold. As the wind increases, it draws heat from the body, driving down skin temperature and eventually the internal body temperature.
- The main unit will show a wind chill reading if the temperature is 10°C or below and the wind speed is above 5km/h i.e. If the wind speed is 5km/h and the temperature is 10°C the main unit will display "- -".

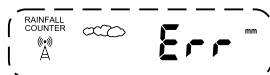
Wind direction

- The main unit will display the wind direction, for an accurate reading the anemometer must point NORTH see page 8.

Note: For maximum wind speed record see section "To read minimum or maximum temperature memory".

Rainfall counter – rain catcher sensor 2. specifications.

The rain catcher sensor 2 transmits data up to 40 meters from the main unit. The remote sensor 2 will record and transmit data every 73 seconds via 433MHz signal. The rain sensor measures rain rate and cumulative rainfall in mm & inches. The rainfall is measured cumulatively and the measuring range is from 0 to 999.9mm. When the measured rainfall unit reaches 999.9mm "Err" will appear on the display. Press and hold the history button for 2 seconds to reset the counter to zero.



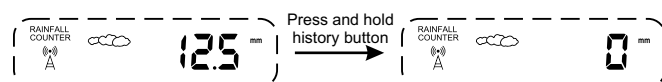
Note: If you wish to measure the average daily/weekly rainfall you will need to record and reset the rain counter each day/week.

The following icons show the rain status:



To reset the rainfall counter:

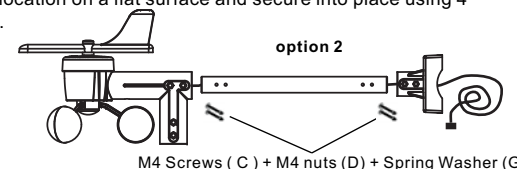
- Press and hold the History button for 2 seconds, the counter is reset to zero.



Anemometer vertical surface mounting -

As in diagram option 2

- Thread the 10meter cable back through the Anemometer body.
- Thread the cable through the pole and mounting base.
- Push the pole into the mounting base and Anemometer body, until it stops and align the holes.
- Insert 2 screws (C) with the spring washers (G) through the holes in the mounting base/pole.
- Insert 2 screws (C) with the spring washers (G) through the holes in the anemometer body/pole.
- Place the nut (D) at the end of each screw and tighten the screw using a screwdriver.
- Position the Anemometer at the chosen mounting location on a flat surface and secure into place using 4 screw (A), 4 anchors (F) & 4 washers (E) provided.



Anemometer ground mounting -

- You will need to buy the longest available length of ID grey water pipe i.e. 0.8" (inches) or 22mm diameter.

Please note: If the diameter of the pole is larger than the anemometer and mounting base you can use a suitable pipe adaptor or alternatively see section below "Mounting on an existing pole".

- You will need to drill new holes at each end of the new pole identical to the holes in the existing pole (take care to use correct drill size when drilling new holes).
- To do this use the holes in the mounting base and Anemometer body as a guide, push the pole as far into the anemometer body & base as possible.
- Drill through the holes on one side and then turn over to drill the other side.
- Prepare the Anemometer the same as the horizontal mounting see page 8
- Push the pole into the mounting base and Anemometer body, until it stops and align the holes.
- Insert 2 screws (C) with the spring washers (G) through the holes in the mounting base/pole.
- Insert 2 screws (C) with the spring washers (G) through the holes in the anemometer body/pole.
- Place the nut (D) at the end of each screw and tighten the screw using a screwdriver.
- Use a peg (the longest peg available for soft ground) to peg the base to the ground.
- Tie the pole to the ground with rope and pegs (please refer to diagram.). If the pole is very long tie it down at more than one section of the pole.

Anemometer mounting on an existing pole -

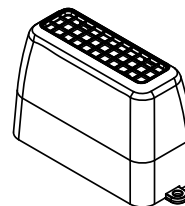
- Prepare the Anemometer body the same as the Vertical surface mounting see page 8.
- You will need 2 U-clamps (6.3 x 31.7 x 76.2mm).
- Use the 2 x u-clamps to tighten the mounting base to the pole as shown in diagram.

Note: If you are going to mount the Anemometer on to the ground it is best to position the Anemometer body as high as possible. The Anemometer mounting base should be bolted or nailed into the ground and for extra security the pole can be tied to the ground on three sides with rope and pegs as in diagram (please refer to diagram "ground mounting" above). If a larger diameter pole is used push the end at least 6"/150mm into the ground.

Positioning the rain catcher (sensor 2)

- Mount the rain catcher (sensor 2) in an open area e.g. top of a fence.
- It must stand vertical and the grill top should be at least 18 inches above surface level.
- Place rain catcher onto the mounting surface and secure into place using 2 of the screws (B). These screws are suitable for hard wood, metal plate and plywood.

Important note: The sensor must be brought indoors during winter to avoid freeze damage. When choosing a suitable location, take in to consideration the effective transmission range of the rain catcher - sensor 2 to the main unit.



SYSTEM START

Radio Controlled Clock -

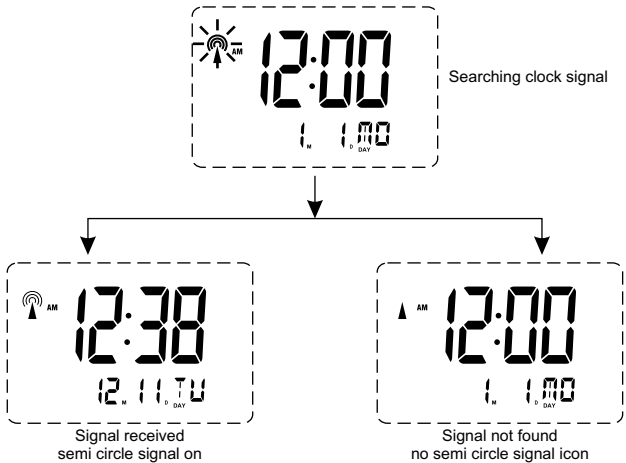
The Radio Controlled mechanism fitted to your clock has a built in receiver, which is tuned to the National Physical Laboratory MSF Transmitter based in Anthorn. The time signal received is controlled by a cesium clock and is accurate to within one second every 1000 years.

The Advantages of using this technology are:

- Automatically adjusts the clock for Summer / Winter time changes.
- Atomic precision – accurate to within one second every 1000 years.
- Fully Automatic set-up. Simply insert the batteries.

To start the main unit -

- Open the battery compartment cover at the back of the clock and insert 3 X AA batteries (included) into the battery compartment.
- All segments of the display will light up briefly and the clock will sound 3 consecutive beeps followed by one single beep.
- Replace the battery cover.
- All three antennae icons will start to flash.



- The clock will search for the time signal and the Time Signal icon “☀” will start to flash.
- At the same time the main unit will search for the transmission from the Remote sensors 1 & 2 and the Antennae Icon “A” & “P” under the outdoor temperature & rain counter will start to flash.
- If the clock receives the time signal it will set automatically to the correct time within 10 minutes. The Time Signal icon “☀” will remain on the display.

Note: If the time signal is not received the clock can be manually set see “Trouble shooting section”.

- If the clock receives the signal from sensors 1 & 2 the clock will display the weather readings within 5 minutes. The antennae icons under the outdoor temperature & rain counter will remain on the display.
- If the main unit does not register the reading from the sensors and the weather data is not displayed, you can manually force the main unit to search for the signal again, to do this see “ remote sensor search” or see “Trouble Shooting”.

Remote sensor search

- To manually force the main unit to search for sensor weather readings.
- Press and hold the channel button for 3 seconds.
- The antennae icons under outdoor temperature and rain counter will start to flash.
- If the clock receives the signal from sensors 1 & 2 the clock will display the reading within 5 minutes.
- The antennae icons will remain on the display.
- If the weather readings are not registered after 5 minutes see section Trouble Shooting”.

To select scale readout

When the main unit has received the weather reading from the remote sensors you can set the LCD display to show you the desired unit of measurement for each device.

Barometer unit: Select between inHg & mb/hpa
Measuring range = 800 – 1050mb/hPa

Indoor/outdoor temperature unit: Select between °C & °F

Indoor temperature:
Measure range = 0°C to 50°C (32°F to 122°F)

Outdoor temperature:
Measure range = -20°C to 70°C (-4°F to 158°F)

Wind speed unit: Select between km/h, mph & knots
Measuring range: 0-160KM/h (0-100mph)

Rainfall counter unit: Select between inch & mm
Measuring range: 0-999.9mm (self emptying)

- Press the SCALE button once & the barometer unit icon will start to flash.
- Press the UP/DOWN button to select between Hg, mb/hpa.
- Press the SCALE button again and the temperature unit will start to flash.
- Press the UP/DOWN button to select between °C or °F.
- Press the SCALE button again and the wind speed/gust unit will start to flash.
- Press the UP/DOWN button to select between km/h, mph and knots.
- Press the SCALE button again and the rainfall counter will start to flash.
- Press the UP/DOWN button to select between inch and mm.
- Press the SCALE button again to exit.

To select a channel reading: (only applicable with the optional outdoor temperature sensors)

If you have more than one outdoor “temperature” sensor set-up you can select between the outdoor temperature reading from each sensor, on the LCD display.

Note: This function will not work when there is only one external temperature sensor.

- Press the CHANNEL button to select between displaying channels 1->2-> 3.
- Press the CHANNEL button once to display the temperature from channel 2.
- Press the CHANNEL button again to display the temperature data from channel 3.
- Press the CHANNEL button again to display the temperature channels in auto scrolling mode.
- The auto scrolling mode icon “C” will appear and the temperature from each sensor will display for 10 seconds.

Temperature trend

The temperature trend icon is used to show the recent temperature trends compared to the last few reading from the previous hour.

Rising	Steady	Falling

Note: We recommend that you use lithium batteries if in your area you are consistently experiencing temperatures lower than –17°C / 1.4°F. The low temperature range with a lithium battery (–20°C / -4°F) will extend to the battery life.

Freeze alert

The Freeze Alert icon “ ❄ FREEZE ALERT ” will appear when the outdoor temperature is 4°C or below. (measured by outdoor sensor).