

# Weather Station

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## Background:

Weather is influenced by many different factors, such as temperature, humidity, wind speed, and air pressure. These factors can be measured to help us understand what the weather is doing right now.

- **Temperature** – tells you how warm or cold the air is.
- **Humidity** – measures how much moisture is in the air.
- **Wind speed** – tells us how fast the air is moving.
- **Air pressure** – shows us how heavy the atmosphere is above us. Changes in air pressure can help us identify when the weather might shift.



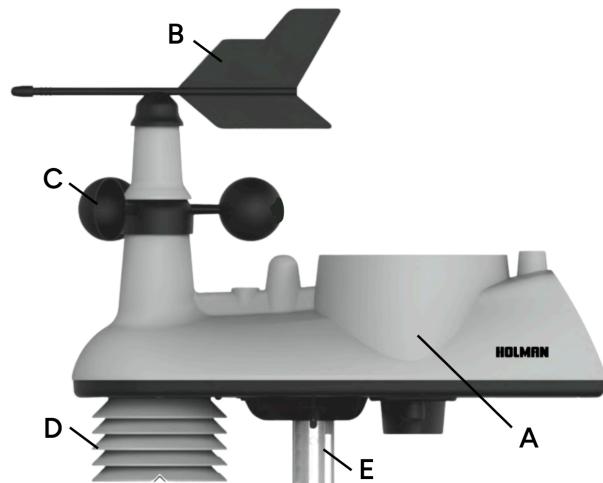
The Holman Weather Station helps measure these factors so we can look at and track the weather, just like professional meteorologists!

## Safety considerations:

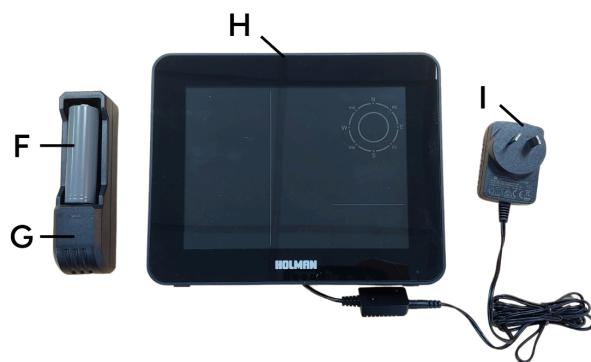
1. **Handling the Equipment:** When setting up or moving the weather station, make sure it's on stable ground to prevent it from falling or getting damaged.
2. **Batteries:** Always check that the weather station uses the correct type of batteries. Never mix old and new batteries or different types of batteries.
3. **Placement:** Make sure the station is not placed near any electrical or water hazards. Remember to always place the station in a place where it will not get stolen. Always get approval from an adult or teacher before setting up the station in a public space.

## Instructions:

1. These are the parts of the weather station:

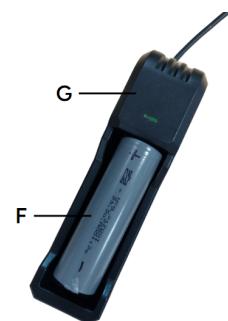


A - Outdoor sensor  
 B - Wind vane (Shows wind direction)  
 C - Wind speed sensor  
 D - Temperature and humidity sensor  
 E - Metal pole



F - Rechargeable battery  
 G - Battery charger  
 H - Display panel (Shows weather data)  
 I - Power cable fo4r display panel

2. To power the outdoor sensor (A), the rechargeable battery (F) should be fully charged. Use the charger (G) to charge the battery (F). The light will turn red when it is charging, and it will turn green when the battery (F) is full.



3. After the battery is full, we want to insert it into the outdoor sensor (A). Turn the outdoor sensor upside down and gently open the battery cover with a screwdriver.



4. Put in the battery (F) and close the cover.
5. Next, we want to power the display panel (H). Connect it to a power supply using the power cable (I).

6. Once the display panel (H) is on, a connection sign (J) next to the “outdoor” sign on the display panel (H) will flash. This means that the display panel (H) is trying to connect to the outdoor sensor (A) automatically.



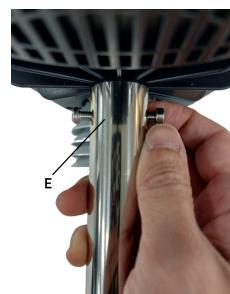
7. If the connection is successful, the connection sign (J) will stop flashing. If the connection sign (J) has disappeared, that means connection has failed.
8. If the connection has failed, hold the “search” button at the back of the display panel (H) for 5 seconds, and the connection sign (J) will start flashing again.



9. Once you have connected the outdoor sensor (A) with the display panel (H), it's time to put them in the right place. First, attach the metal pole (E) to the outdoor sensor (A). Then, attach the screws to hold them in place.



10. Place the outdoor sensor (A) outside at a place where you can easily see it to prevent it from being stolen. The display panel (H) should be placed indoors, and as close as possible to the outdoor sensor (A).



11. You are now ready to learn about the weather!