

DAVIS WEATHER STATION SUMMARIES

Vantage Pro2 Weather Station.

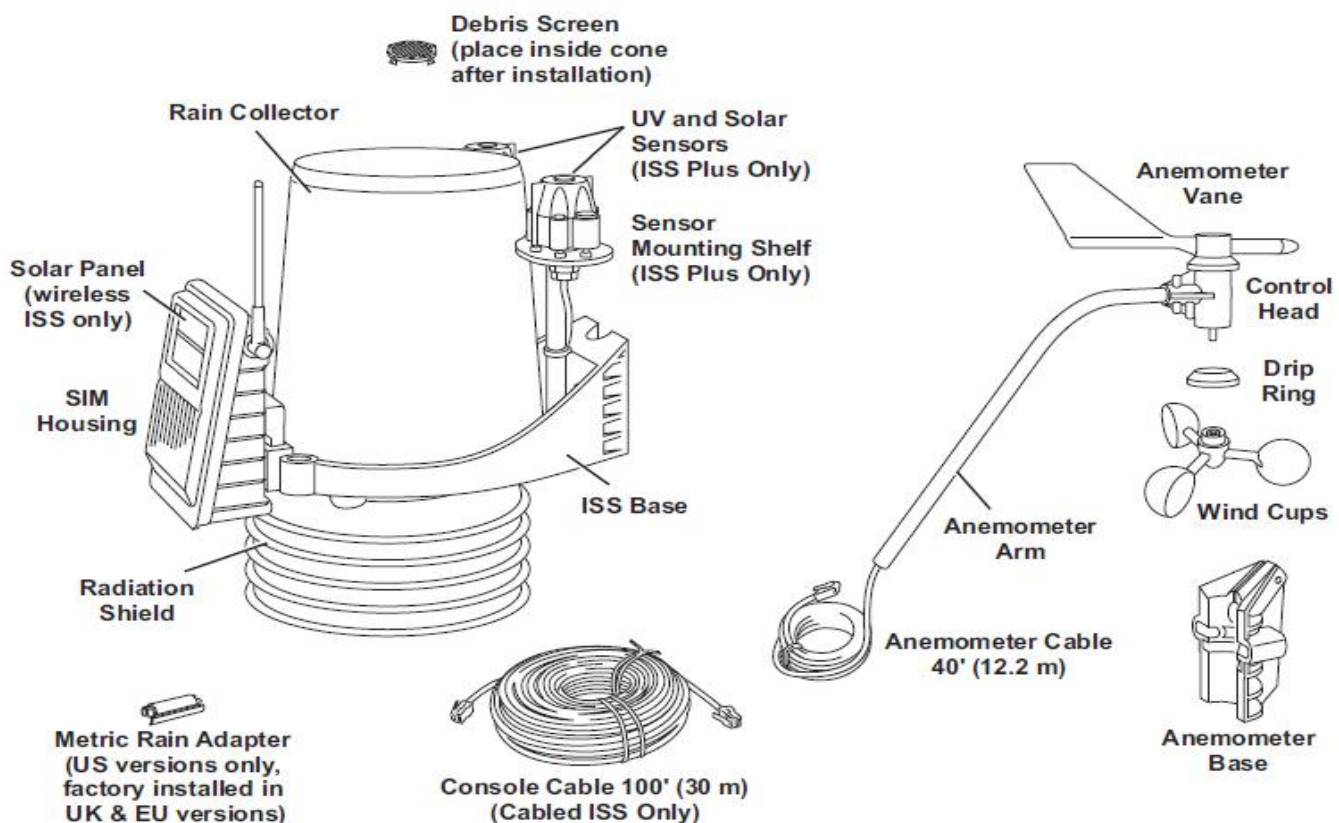
ISS- (Integrated Sensor Suite) collects outside weather data and sends the data to Vantage Pro2 console

SIM- (Sensor Interface Module) contain the main brain of ISS and radio transmitter. The work of SIM is to collect outside weather data from the ISS sensors and then transmits the data to your Vantage Pro2 console.

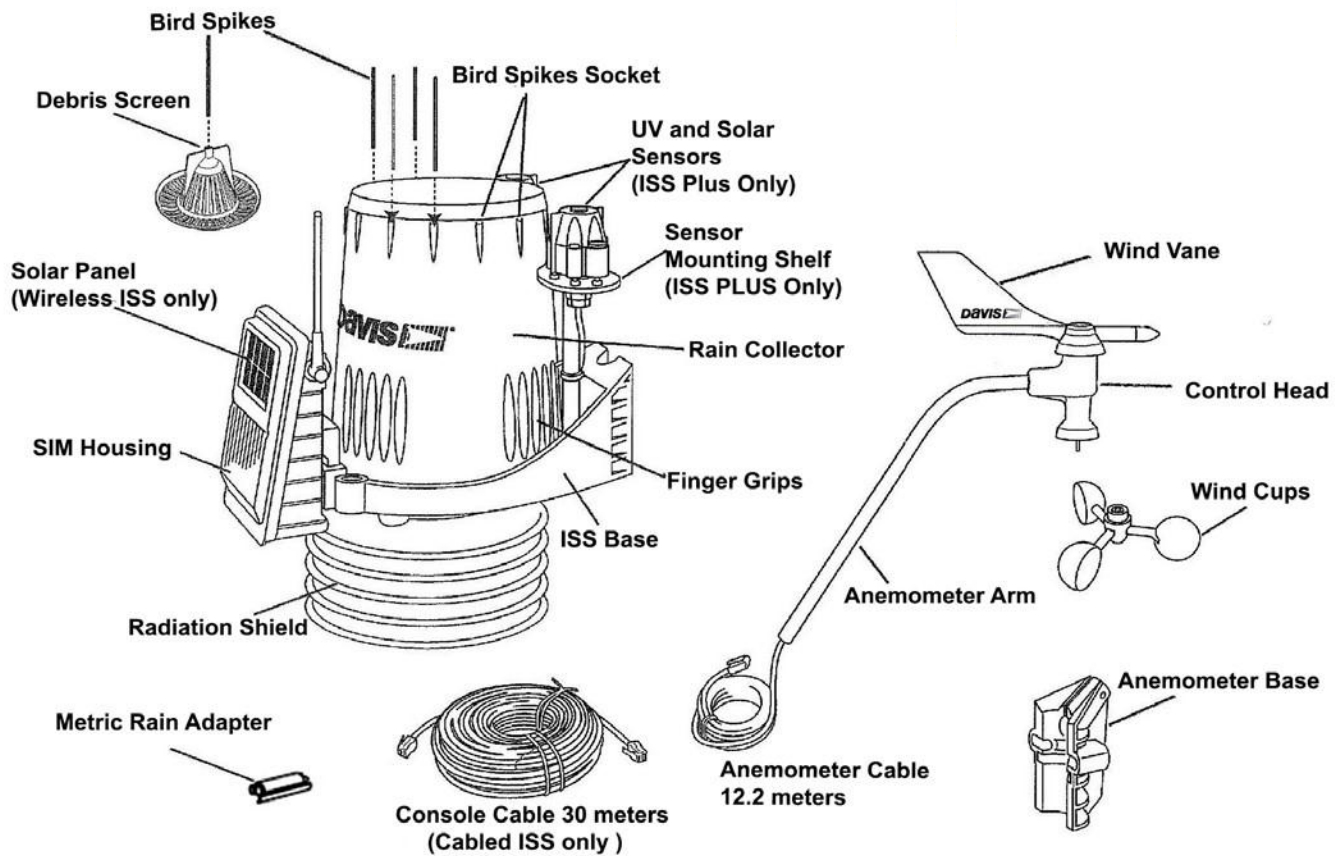
Parameter of Vantage Pro2 model 6162:

- Wind Speed
- Wind Direction
- Temperature/Humidity
- Rain Gauge
- Solar Radiation - optional
- Ultra Violet Radiation-optional

Parts of Weather Station: (OLD Model)



(New model)



Weather Station tools:



Compass



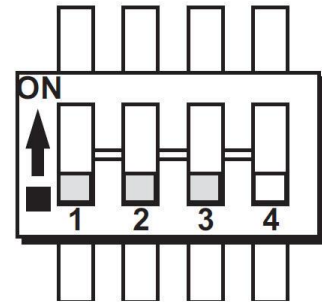
Adjustable Wrench



GPS (Global Positioning System) Receiver

Weather Station Dip switch configuration:

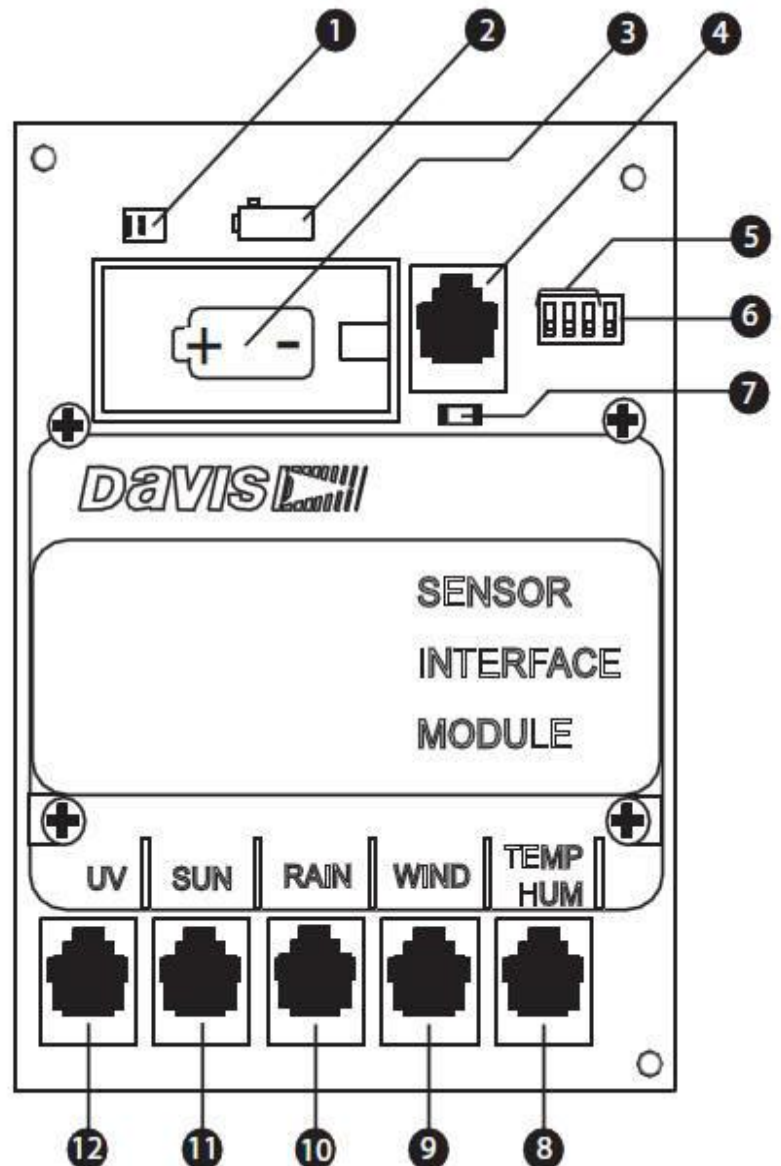
Note: The number four switch use only for testing



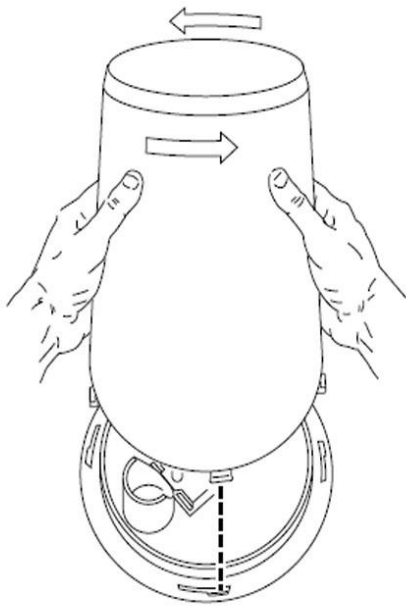
ID CODE	SWITCH 1	SWITCH 2	SWITCH 3
#1 (default)	off	off	off
#2	off	off	ON
#3	off	ON	off
#4	off	ON	ON
#5	ON	off	off
#6	ON	off	ON
#7	ON	ON	off
#8	ON	ON	ON

Wireless SIM Board

1. Solar Power Tab
2. AC Adapter Socket
3. Battery Socket
4. Cabled Connection
5. Transmitter ID
6. DIP Switch
7. Test LED
8. Temperature/Humidity
9. Wind Sensor Connector.
10. Rain Sensor Connector
11. Solar Sensor Connector
12. UV Sensor Connector

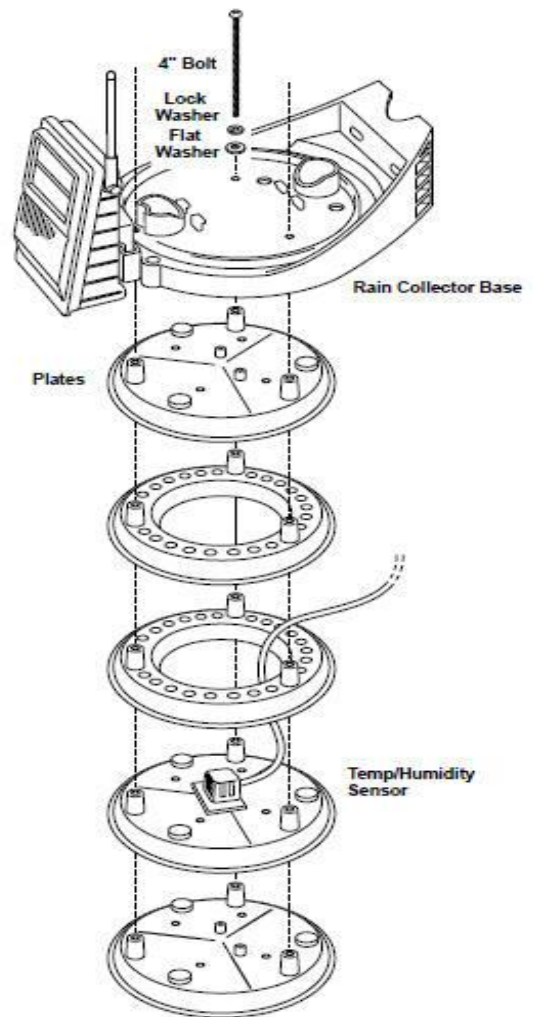


ISS Maintenance

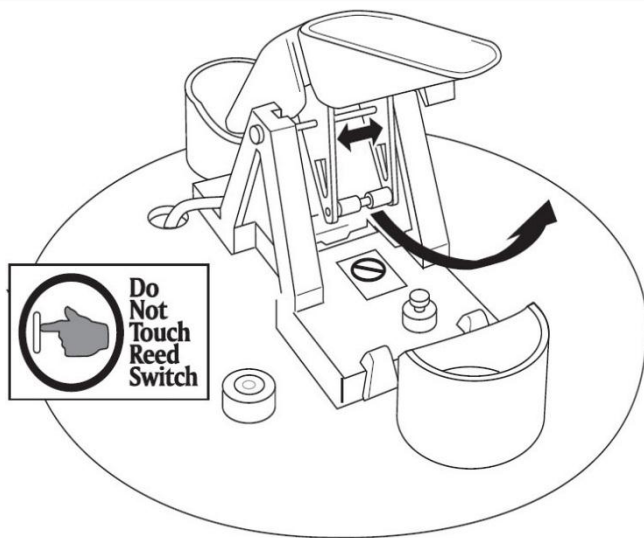


Twist to Open

Rain Collector



Radiation Plates for Sensor



Rain Gauge Tipping Bucket

NOTE: Spraying down or using water excessively to clean the radiation shield can damage the sensitivity of the sensor and also can affect the data reading transmit by the ISS.

Specifications:

Wireless ISS:

- Temperature range: 40 to 65° Celsius)
- Transmitter ID codes:.....8user-selectable
- License:.....low Power(less than 8mW)
No license required
- Transmission Frequency:.....902-928MHz for US
:.....868.0-868.6MHz for OV
- Primary:.....Solar power –Davis solar charger
- Backup Power:.....CR-123,3V lithium battery

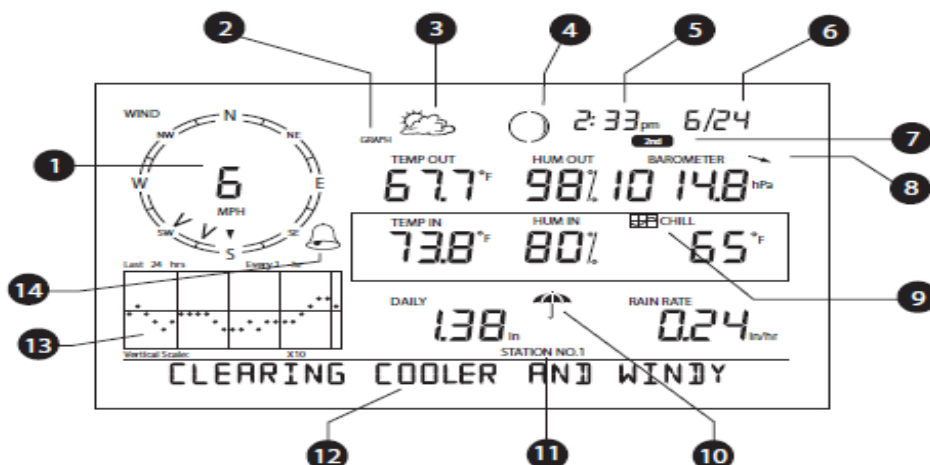
(8 months without sunlight greater than 2years depending
On solar charging)

ISS Weather Variable Update Intervals

(Transmitter ID Dependent)

- Wind speed: 2.5 to 3 seconds
- Wind direction: 2.5 to 3 seconds
- Accumulated rainfall: 20 to 24 seconds
- Rain rate: 20 to 24 seconds
- Outside temperature: 10 to 12 seconds
- Outside humidity: 50 seconds to 1 minute
- Ultraviolet radiation: 50 seconds to 1 minute
- Solar radiation: 50 seconds to 1 minute

Vantage Pro Console



Display Features

- | | |
|---------------------------------|------------------------------|
| 1. Compass Rose | 8. Barometric Trend Arrow |
| 2. Graph & Hi/Low Mode Settings | 9. Graph Icon |
| 3. Forecast Icons | 10. Current Rain Icon |
| 4. Moon Phase Indicator | 11. Station Number Indicator |
| 5. Time/Sunrise Time | 12. Weather Ticker |
| 6. Date/Sunset Date | 13. Graph Field |
| 7. 2ND Button Indicator | 14. Alarm Icon |

Vantage Pro Console Icon

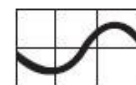
Alarm Bell

Flashes when an alarm is triggered. Also indicates when the console is in Alarm Mode.



Graph

Appears next to the currently selected weather variable. Also indicates the graphed variable on most screens.



Second Function

Appears when you press 2ND key. Indicates that console key secondary functions are enabled.



Rain

Appears when the console is currently detecting rain.

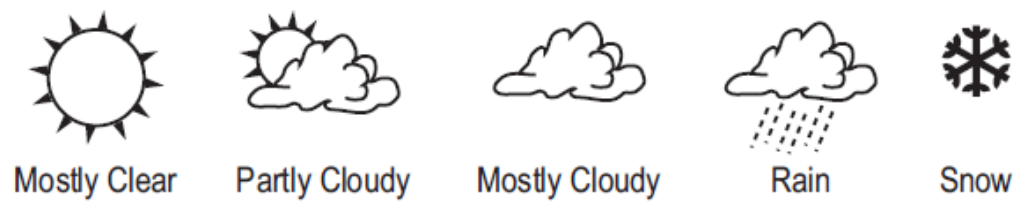


Barometric Pressure Trend

Arrows show direction of pressure change for last three hours.



Forecast



Indicates the weather forecast for the next 12 hours.

Moon Phase



Shows the current moon phase. Sequence shown for Northern Hemisphere. Reverse sequence for the Southern Hemisphere.

Forecast Icon	Description of Forecasted Weather
	Mostly clear
	Partly cloudy
	Mostly cloudy
	Rain likely
	Snow likely
	Rain possible but not likely
	Snow possible but not likely
	Rain, freezing rain, sleet and/or snow likely
	Rain, freezing rain, sleet and/or snow possible but not likely

Tropical Cyclone Intensity / Category

Intensity / Category	Maximum Winds
Tropical Depression	Between 35 KPH and 64 KPH near the center
Tropical Storm	Between 65 KPH and 118 KPH near the center
Typhoon	119 to 200 KPH near the center
Super Typhoon	Maximum winds greater than 200 KPH

Wind Speed		Description
0 -1 mph; (0 -1.6 kph)		Calm
1-3 mph; (1.6 - 4.8 kph)		Light Air
3 - 7 mph; (4.8 - 11.3 kph)		Light Breeze
7 -12 mph; (11.3 - 19.3 kph)		Gentle Breeze
12 - 18 mph; (19.3 - 29.0 kph)		Moderate Breeze
18 - 24 mph; (29.0 - 38.6 kph)		Fresh Breeze
24 - 31 mph; (38.6 - 49.9 kph)		Strong Breeze
31 - 38 mph; (49.9 - 61.2 kph)		Near Gale
38 - 46 mph; (61.2 -74.1 kph)		Gale
46 - 54 mph; (74.1 - 86.9 kph)		Strong Gale
55 - 63 mph; (88.5 - 101.4 kph)		Storm
64 - 73 mph; (103.0 - 117.5 kph)		Violent Storm
74 mph or above; (119.1 kph)		Hurricane

Revised Public Storm Warning System

PSWS	LEAD TIME * (hrs)	WINDS (KPH)	IMPACTS OF THE WIND
#1	36	30 - 60	No damage to very light damage
#2	24	61-120	Light to moderate damage
#3	18	121-170	Moderate to heavy damage
#4	12	171-220	Heavy to very heavy damage
#5	12	more than 220	Very heavy to widespread damage













* On first issuance only.

Rain Intensity
















- Rainfall intensity is classified according to the rate of precipitation:
- **Light rain** — when the precipitation rate is < 2.5 mm per hour
- **Moderate rain** — when the precipitation rate is between 2.5 mm - 7.6 mm or 10 mm per hour
- **Heavy rain** — when the precipitation rate is > 7.6 mm per hour, or between 10 mm and 50 mm per hour
- **Extreme rain** — when the precipitation rate is > 50 mm per hour

PAG-ASA Color Coding Rain Warning

RED WARNING	 More than 30mm rain observed in 1 hour and expected to continue in the next 2 hours	 Serious flooding expected in low lying areas	RESPONSE: EVACUATION
ORANGE WARNING	 15-30mm (intense) rain observed in 1 hour and expected to continue in the next 2 hours	 Flooding is threatening	RESPONSE: ALERT for possible evacuation
YELLOW WARNING	 7.5-15mm (heavy) rain observed in 1 hour and expected to continue in the next 2 hours	 Flooding is possible	RESPONSE: MONITOR the weather condition

RAINFALL ADVISORIES, CLASSIFICATION, AND MEASUREMENT					
COLOR-CODED RAINFALL ADVISORIES AND CLASSIFICATION		RAIN MEASUREMENT		FLOOD POSSIBILITY	RESPONSE
<div>RED</div> <div>RAINFALL ADVISORY</div>	<div></div> <div>TORRENTIAL</div>	<div>MORE THAN 30mm RAIN</div> <div>observed in 1 hour and expected to continue in the next 2 hours</div>	<div>=</div> <div></div> <div>8 gallons per square meter/hour</div>	<div>Serious Flooding expected in low lying areas</div>	<div>EVACUATION</div>
<div>ORANGE</div> <div>RAINFALL ADVISORY</div>	<div></div> <div>INTENSE</div>	<div>15-30mm RAIN</div> <div>observed in 1 hour and expected to continue in the next 2 hours</div>	<div>=</div> <div></div> <div>4 to 8 gallons per square meter/hour</div>	<div>Flooding is threatening</div>	<div>ALERT</div> <div>for possible evacuation</div>
<div>YELLOW</div> <div>RAINFALL ADVISORY</div>	<div></div> <div>HEAVY</div>	<div>7.5-15mm RAIN</div> <div>observed in 1 hour and expected to continue in the next 2 hours</div>	<div>=</div> <div></div> <div>2 gallons per square meter/hour</div>	<div>Flooding is possible</div>	<div>MONITOR</div> <div>the weather condition</div>
	<div></div> <div>MODERATE</div>	<div>2.5 - 7.5mm RAIN</div> <div>observed in 1 hour and expected to continue in the next 2 hours</div>	<div>=</div> <div></div> <div>2.5 liters per square meter/hour to 7.5 liters per square meter/hour</div>	<div>(Flooding still possible in certain areas)</div>	
	<div></div> <div>LIGHT</div>	<div>LESS THAN 2.5 mm RAIN</div> <div>observed in 1 hour and expected to continue in the next 2 hours</div>	<div>=</div> <div></div> <div>up to 2.5 liters per square meter/hour</div>		
PAGASA.GOV.PH @DOST_PAGASA					
PCDSPO GOV.PH					

Corresponding Action:

	RAIN	WIND	WARNING	ACTIONS TO TAKE
NORMAL			No severe weather warning*	
WEATHER WATCH	 Uncertain	 Uncertain	Severe weather expected but the intensity and/or affected areas are still uncertain. Monitor situation closely.	
MODERATE	 F* 24 hrs: 30-50 mm F* 48 hrs: 60-100 mm	 F* 75-100 kph	Moderate severe weather. Be prepared. Expect impacts on traffic and outdoor activities.	
HEAVY	 F* 24 hrs: 50-100 mm F* 48 hrs: 100-150 mm	 F* 100-130 kph	Severe weather of heavy intensity. Take precautions. Expect heavy traffic and some damage. Consider work suspension.	
EXTREME	 F*24 hrs: 100 mm or more F*48 hrs: 150 mm or more	 F* 130 kph or more	Extremely severe weather that poses significant risk to life. Take precautionary actions. Expect widespread damage and follow evacuation orders.	

PAGASA'S REVISED STORM WARNING SYSTEM AS OF MAY 2015

SIGNAL NO.1

winds of 30 to 60 kph in the
next 24 hours

SIGNAL NO.2

winds of 61 to 120 kph in the
next 24 hours

SIGNAL NO.3

winds of 121 to 170 kph in the
next 18 hours

SIGNAL NO.4

winds of 171 to 220 kph in the
next 12 hours

SIGNAL NO.5

winds of more than 220 kph in the
next 12 hours

UPDATED TROPICAL CYCLONE CLASSIFICATIONS

TROPICAL DEPRESSION

winds of up to 61 kph

TROPICAL STORM

winds of up to 62 to 88 kph

SEVERE TROPICAL STORM

winds of up to 89 to 117 kph

TYPHOON

winds of up to 118 to 220 kph

SUPER TYPHOON

winds exceeding 220 kph