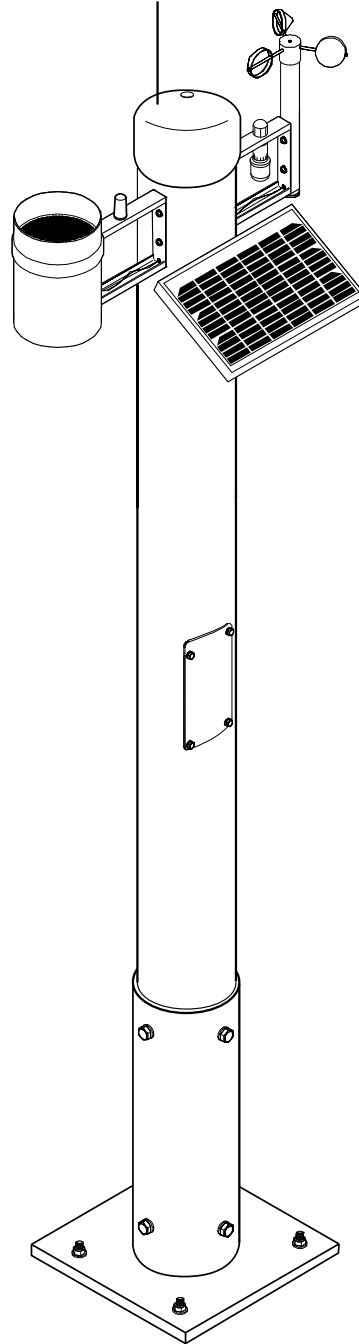


OASIS WIRELESS WEATHER STATION

User Manual



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RMIS Part No. 500760

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INTRODUCTION

General Description

Page 4 shows the completed system.

The pole contains the complete preassembled Wireless Module shown on page 5.

Tower Installation consists of (3) main steps:

1. Base Preparation:
Pour concrete and mount base according to Pages 6.
2. Tower Assembly:
Attach Sensor Brackets, Solar Panel, connect cables and close the pole per Pages 7-10.
3. Tower Erection:
Attach Tower to the Base Plate per Page 11.
NOTE: The Tower is top-heavy. Therefore (2) individuals will be required for this task.

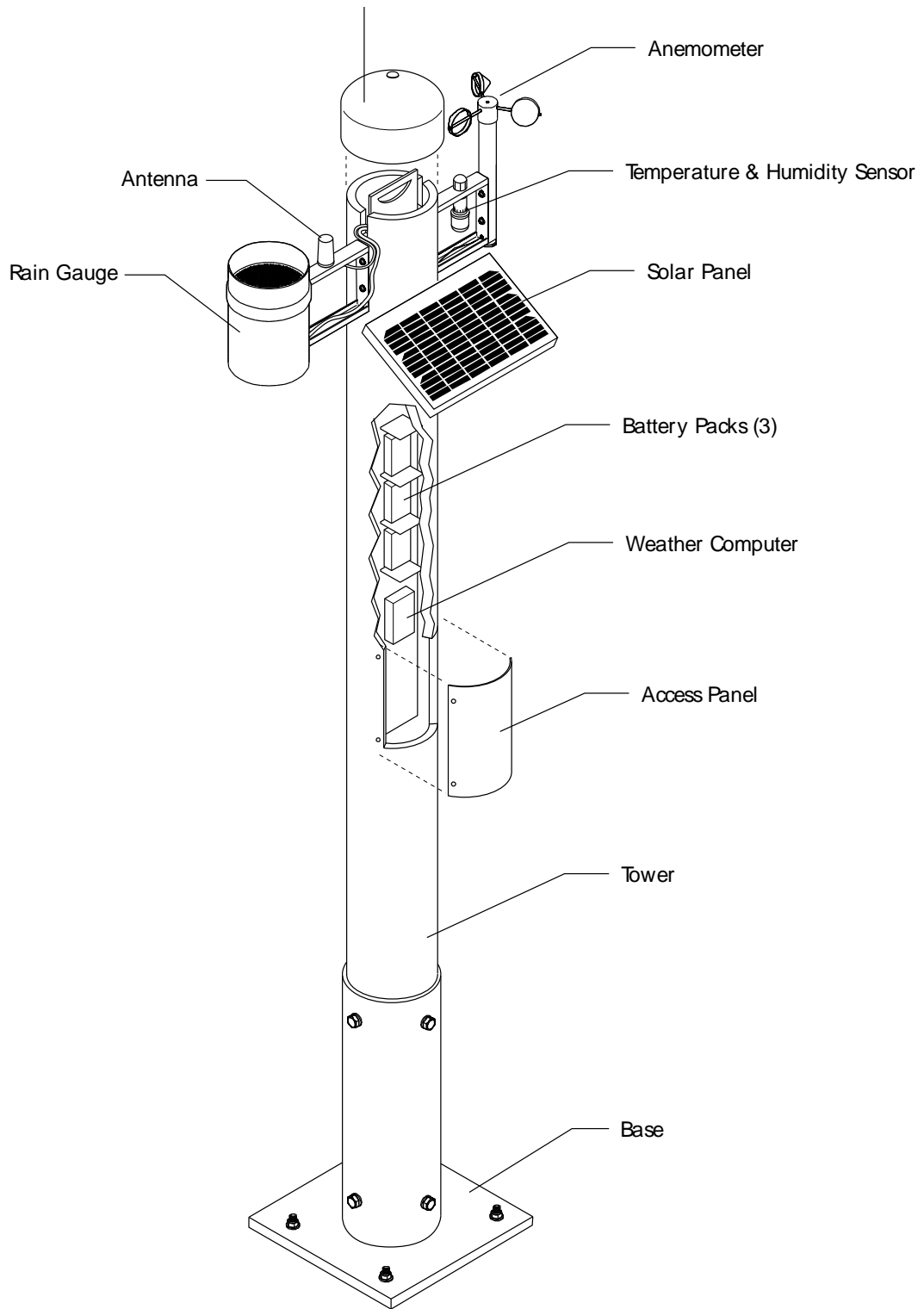
This is followed by the set-up and operation of the Base Station.

General Precautions

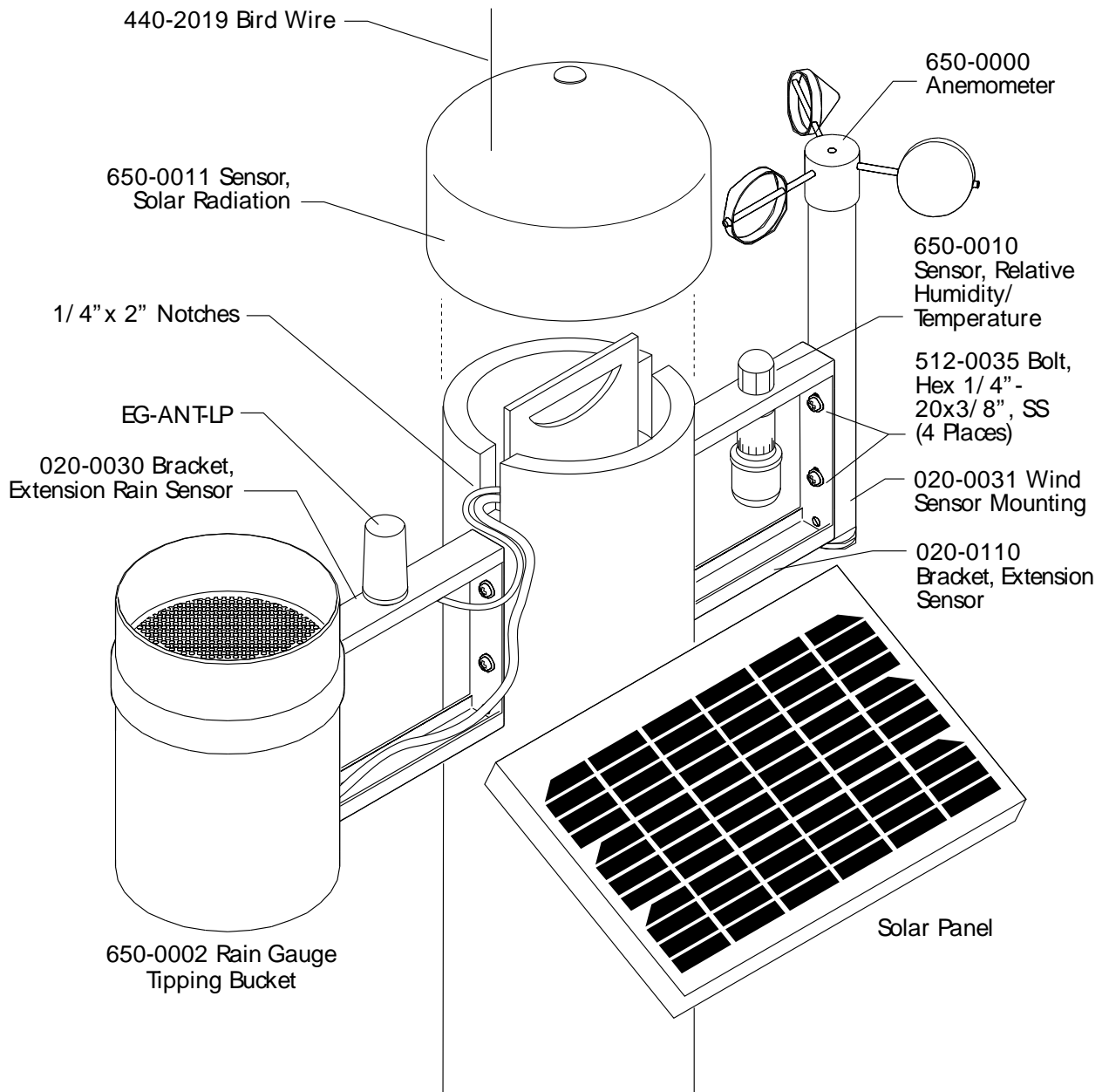
PRECAUTION

TO PREVENT DAMAGE DUE TO VIBRATION DURING SHIPPING (2) SMALL PIECES OF BUBBLE WRAP ARE USED BEHIND THE ACCESS PANEL AND THE TOP END OF THE POLE TO POSITION THE PANEL FOR A SNUG FIT. PLEASE REMOVE BUBBLE WRAP BEFORE INSTALLATION. IT IS NOT NECESSARY TO SLIDE THE PANEL OUT OF THE POLE.

Oasis Wireless Weather Station - Completed System



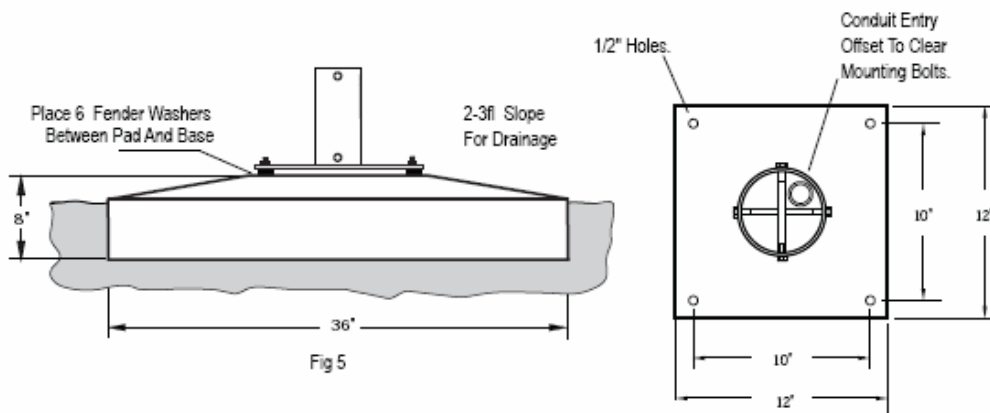
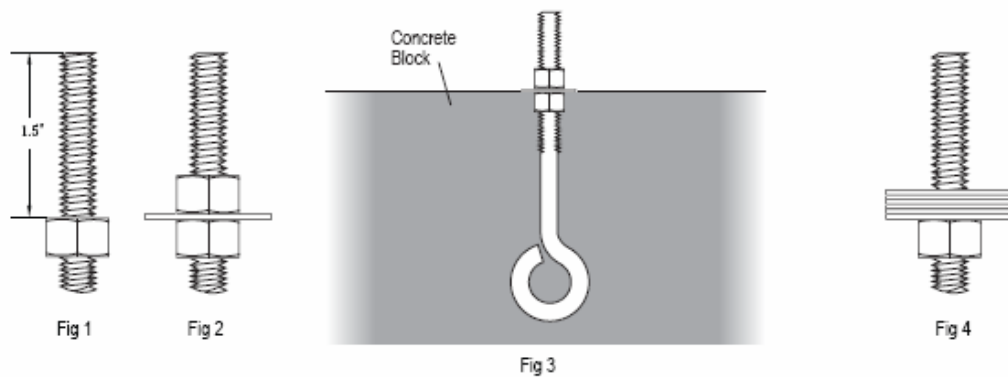
Oasis Wireless Weather Station - System Detail



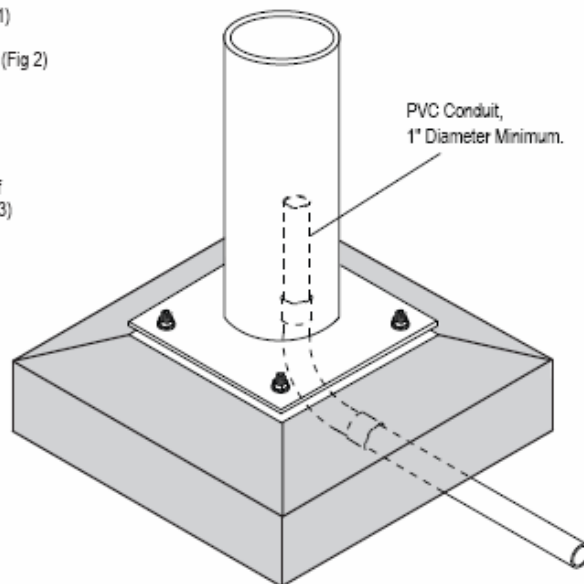
INSTALLATION

Base Preparation

Weather Station Base Bolt Installation

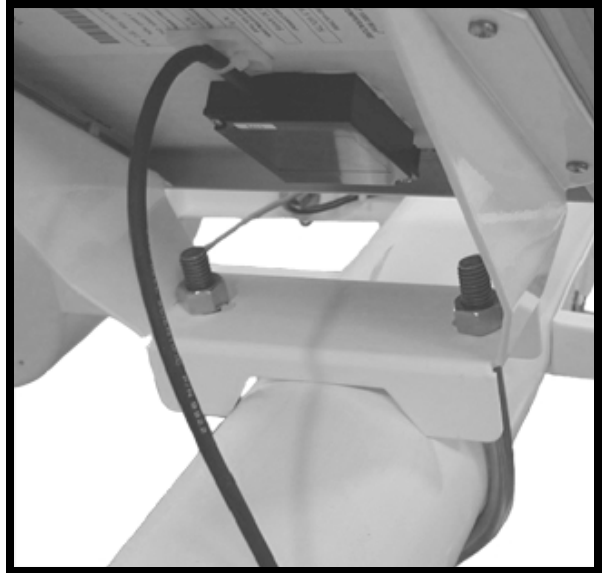
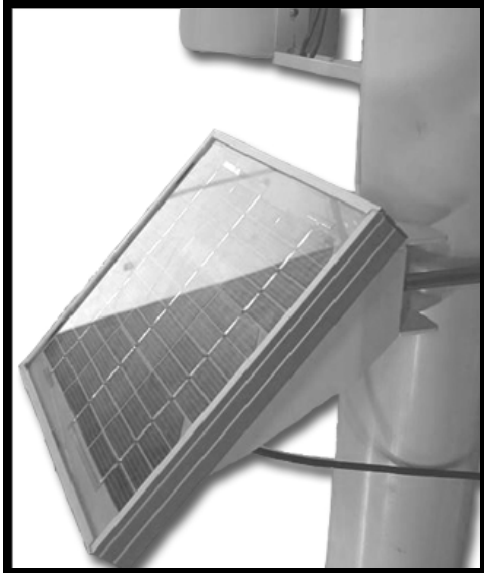


- Step 1: Thread nut on the eyebolt approx 1.5' from top. (Fig 1)
- Step 2: Add one (1) fender washer and then the Second nut. (Fig 2)
- Step 3a: Using a concrete form and the Rain Master provided template, set the bolts prior to pouring the concrete. Leave space in center of concrete for PVC conduit.
- Step 3b: Press eyebolt into freshly poured concrete until top of washer is flush with the top surface of concrete. (Fig 3)
- Step 4: Repeat Steps 1-3b for remaining three eyebolts
- Step 5: When concrete has set, remove top nut and add five (5) additional fender washers. (Fig 4)
- Step 6: Move Weather Center base into position. Add final fender washers, and secure assembly with nut removed in Step 5. (Fig 5)

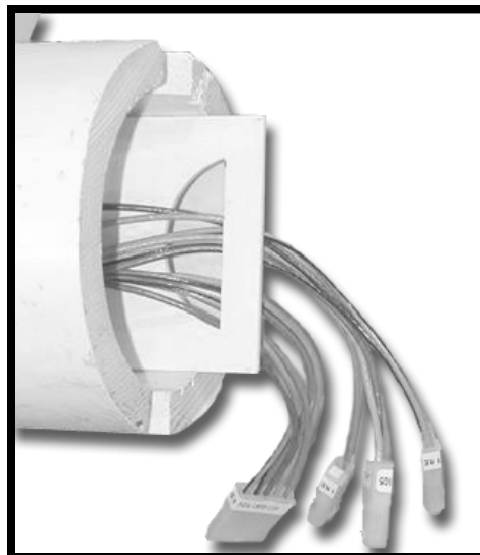


Tower Assembly - Sensor Installation Instructions

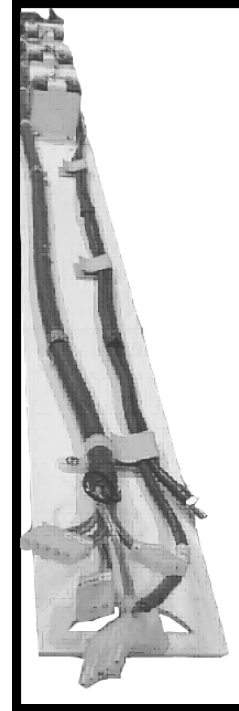
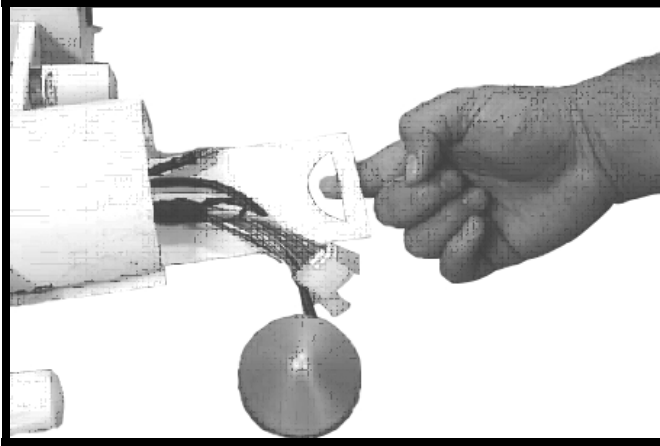
1. Install **Solar Panel** using, Bracket, U Bolt and 2 nuts, approximately 12" from the top.



2. Install all remaining sensors per Page 8. The Weather Center Tube comes “plug-in ready”, with all cables connected to the computer that is mounted at the lower end of a sliding panel. Retrieve them through the top opening of the tube. For ease of packaging the cables will be held confined in the C-shaped opening in the panel. Push them out of the opening so they can be freely connected to their respective sensors. Plug the connectors to the appropriate sensor cables according to the labels, as shown in the following pages.

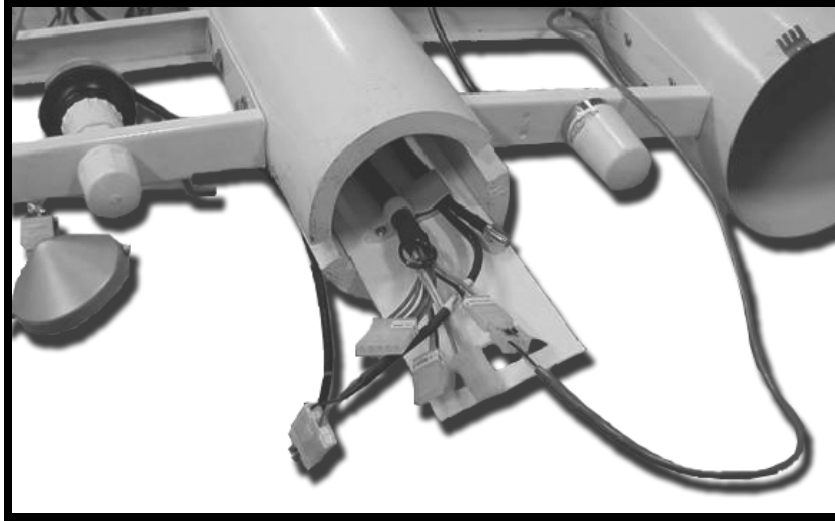


3. After installing the Sensor Brackets, position the pole horizontally for ease of assembly. Retract the Wireless Panel about (1) foot as shown so all the connectors are accessible, as shown below.

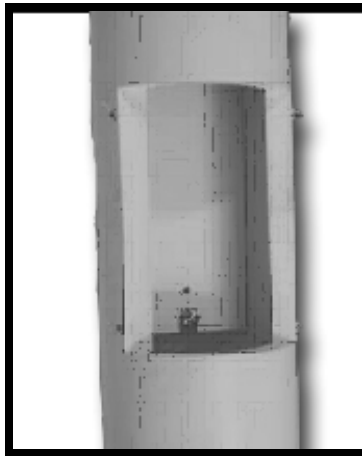


4. The Pole encloses the Wireless Module. The Computer and (3) re-chargeable Batteries are mounted on this panel and pre-wired so that connection to Sensors, Solar Panel and Antenna are just a matter of mating the connector according to their labels. Since the Connectors are keyed differently and numbered 1, 2, 3 & 4 they can be easily matched up, thus precluding the possibility of a mix-up.

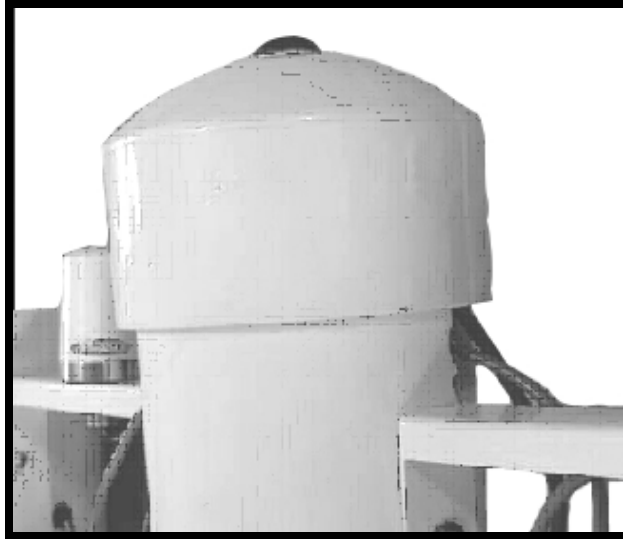
5. Mate connectors from the sensors, antenna and solar panel. Then slide the panel back into the pole until the panel comes to rest on the bolt in the mid-section of the pole.



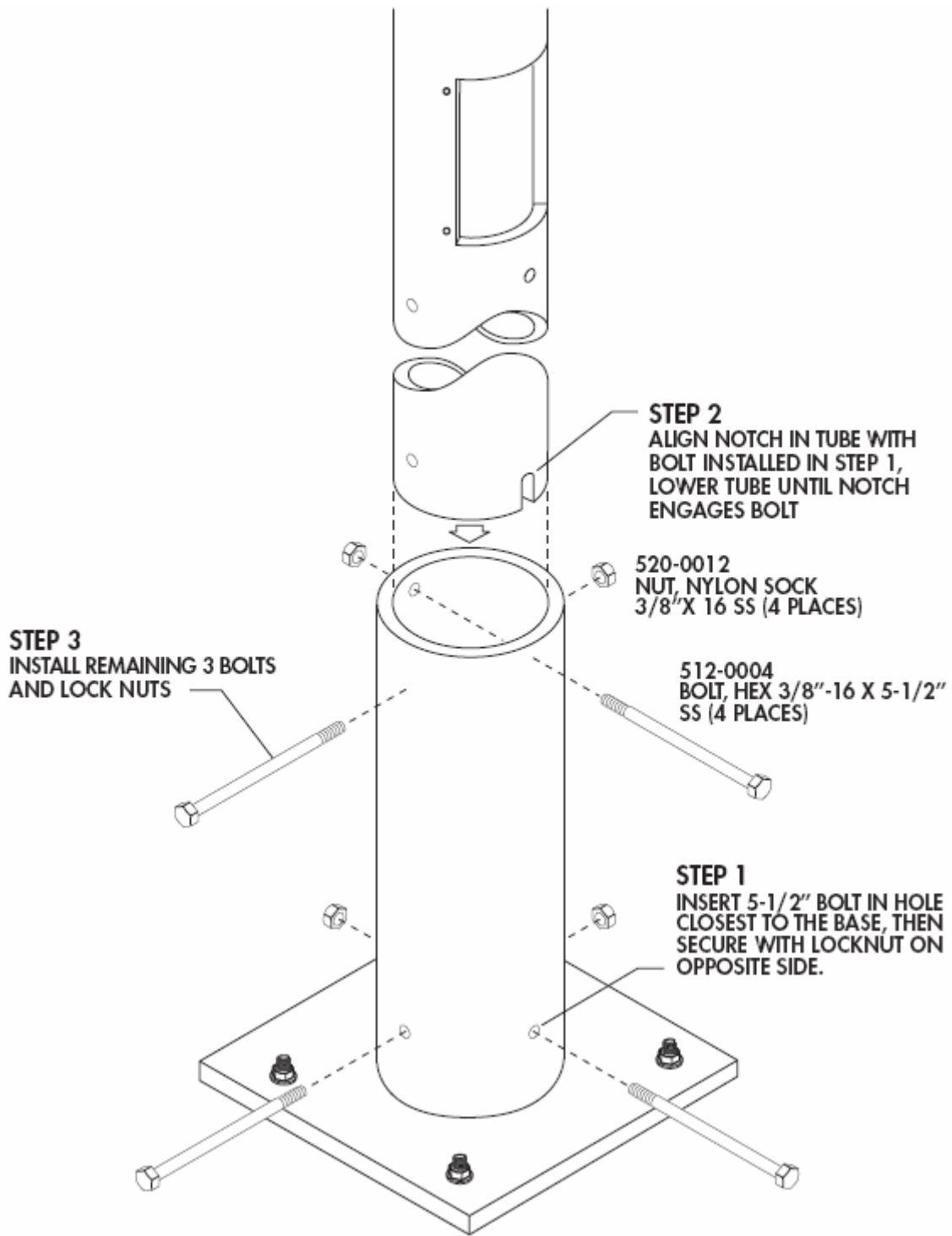
6. After all the connections are made, tuck the cables in the pole and slide the panel down until it rests against the bolt seen through the access panel.



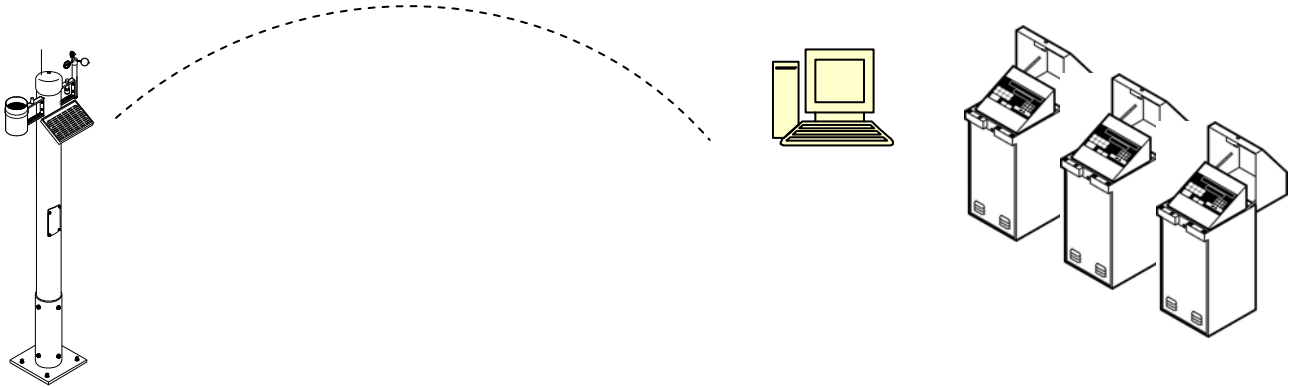
7. Gently push the Solar Sensor Dome to close the pole and insert Bird Wire. Close the access panel with (4) one way bolts. The Tower is now ready to be installed in its base.



Tower Erection



General: Once the Wireless Weather Center is erected, it has to be prepared for communication with OASIS andperiodically monitored thereafter.



The main tasks involved in these activities are:

- Setting Up of the Base Radio and Antenna.
- Establishment of communication between the Base Radio and the Wireless Weather Center.
- Reviewing the information gathered by the Weather Center.

Base Radio and Antenna Set Up:

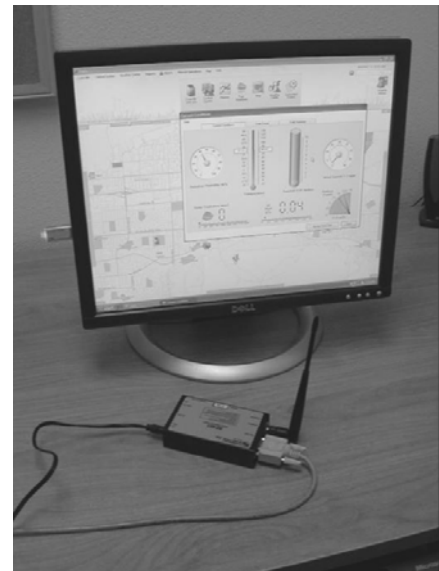
The Weather Center includes the SS Radio and a 6" long 900 MHz whip Antenna. The Radio is to be Connected to a designated RS232 port on the Central Computer. The whip antenna is to be connected to the radio at its designated connector. This antenna is capable of communicating from inside an industrial building with the weather center within 900'.

For greater distances or if faced with reception issues, contact the factory for other alternatives.

Establishment of Communications:

This phase consists of a Two Stage/Four Step procedure to:

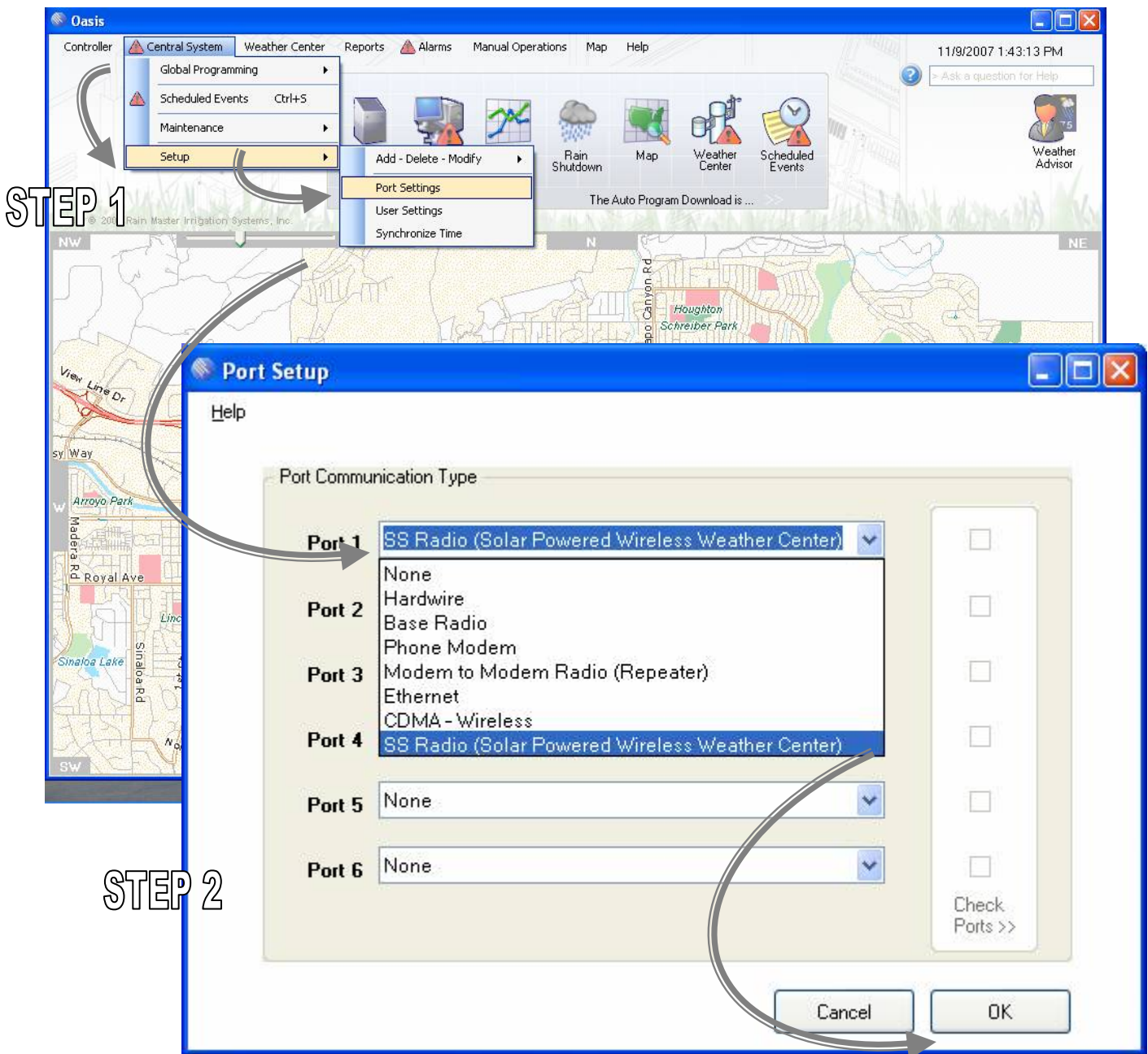
- Configure the Central System Port to enable communication with the Weather Station
- Add in the Weather Station into OASIS



Configuring the Central System Port

Step 1: On TASK BAR, Click on CENTRAL SYSTEM, then SET UP and then, PORT SETTINGS to Bring up the Port Set Up Screen.

Step 2: In the Port Set Up screen, proceed to the desired port and using the drop down list, enter the SS RADIO into the field. Then Click on OK to complete the port set-up task.



Setting Up the Weather Station in OASIS

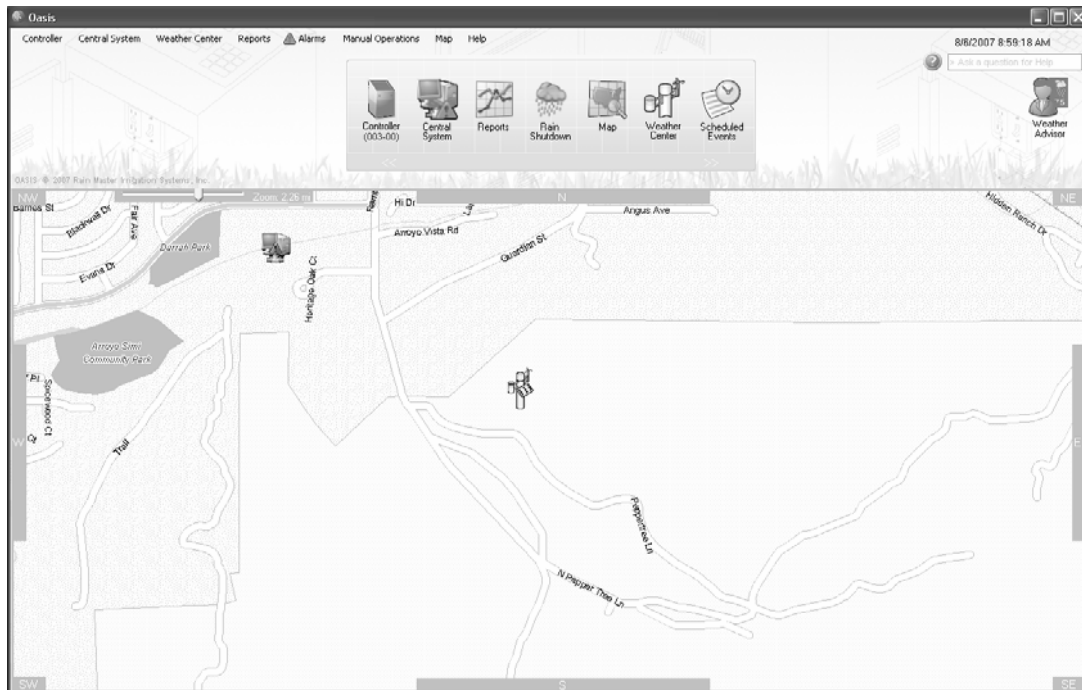
STEP 3: Return to the TASK BAR and click again on Central System, then on Add/Del/Mod, Oasis Weather Center to bring up the Weather Center alteration Screen.

STEP 4: Enter Weather Center Parameters in their respective fields, especially the selected port for the SS RADIO. Then click on OK.

This will conclude the Set-Up phase. At this point the Weather Station symbol will be placed at the corresponding position on the Oasis Map.

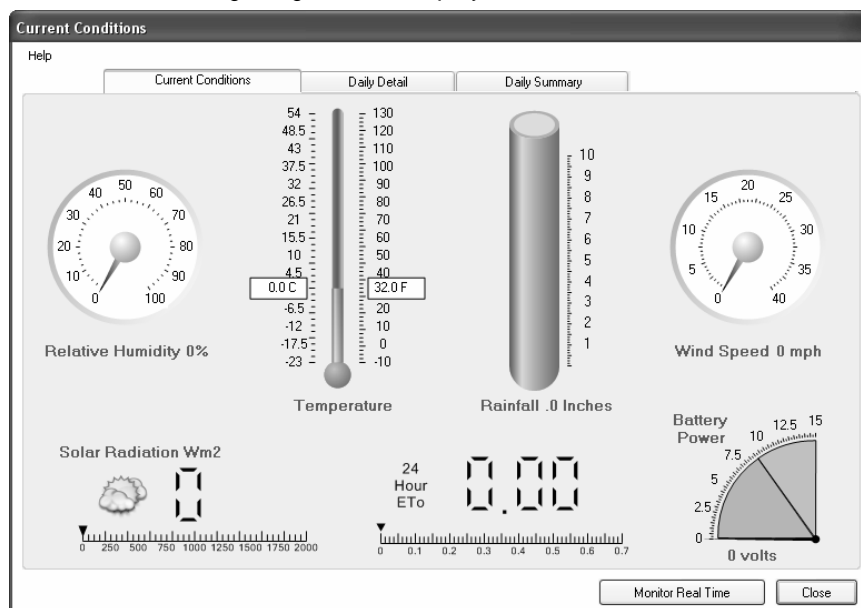
The screenshot displays the OASIS software interface. The main window shows a menu structure with 'Central System' selected, leading to 'Add - Delete - Modify', which then opens the 'Oasis Weather Center' sub-menu. A dashed circle highlights the 'Port Selection' area in the dialog box, showing 'Port: 1' and 'Type: SS RADIO'. The 'Wireless' checkbox is checked. The 'OK' button is highlighted with a dashed circle. The background shows a map of a residential area with various parks and streets.

Oasis Weather Center View



To view data acquisition activity and to monitor the performance of the weather center, the following steps are to be followed:

- Click on the Weather Center image. When a dialog box appears click on the **<< Options** label and then select Weather **VIEW** from the list of options.
- OASIS will then attempt to establish contact with the weather center and obtain the current weather data, and the following image will be displayed on the screen.



This image shows all of the indicators at the **default** positions.

Normal Operation

Table 1 provides typical values for prevalent conditions. If there is a significant mismatch between the values displayed and those in Table 1 that correspond to observed weather conditions, it may be necessary to investigate the discrepancy and take necessary action.

TABLE 1: Typical values for prevalent conditions.

| RELATIVE HUMIDITY % | | WIND SPEED MPH | |
|------------------------|-------------------|-------------------------------------|---|
| <25 | DRY | <25 | BREEZE |
| 25-60 | PLEASANT | 25-50 | GALE |
| >60 | HUMID | >50 | STORM |
| TEMPERATURE °F | | SOLAR RADIATION W/m ² | |
| <65 | COOL-COLD | <150 | DARK-OVERCAST |
| 65-80 | PLEASANT | 150-1500 | CLOUDY TO BRIGHT AND SUNNY |
| >80 | WARM - HOT | >1500 | ERROR |

General Notes:

- For the 24 Hour ET Sensor to work the Solar Radiation Sensor and Rain Sensor need to be working properly
- The Battery Indicator should display readings in the Green Zone. If the readings start approaching the Red area then the batteries are not recharging. If the Weather Station is not using batteries and is plugged into a power source instead, the battery indicator will still show a reading in the Green.
- If Oasis was unable to contact the weather station it will display a message alerting the user that it was unable to establish a connection with the station and prompting the user to ensure that the weather center is configured properly.

To view 'real-time' weather click on the 'Monitor Real Time' button and OASIS will display real-time weather for the duration of 1 minute. Once the Monitor Real Time button has been pressed you must wait for 1 minute for the cycle to complete before closing the screen.