



Preparing Radiosondes for a Dual Flight Video Transcript

**Prepared by
Sterling Field Support Center**

**U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Weather Service/Office of Operational Systems
Field Systems Operations Center/Observing Systems Branch**

Title Page

(00:00-00:15)

-No Audio-

Supplies demonstrated on the table

(00:16-00:21)

Narrator: "Before starting radiosonde preparation, gather the supplies needed for both instruments."

Rolling the MicroART bag

(00:22-00:47)

Narrator: "First, begin preparing the Sippican B2 radiosonde. Remove the outside sleeve and all contents, such as the battery and hygistor can, and sit them aside. After filling out the information on the mailing bag, begin folding and rolling it so that it can fit back into the radiosonde."

Placing the MicroART bag into the compartment

(00:48-01:02)

Narrator: "Once you've finished rolling the bag, it should then be slid into the bottom compartment where the hygistor can was once placed. Notice how it should fit flush with the compartment lid and not protruding outwards."

Deploying the Temperature Boom

(01:03-01:27)

Narrator: "Next, the temperature boom must be properly placed. Remove the plastic tab and extend the boom at a 45 degree angle from the side of the radiosonde. Before removing the plastic, adjust the sensor to its correct position."

Opening and inserting the hygistor

(01:28-02:12)

Narrator: "Using a can opener, carefully open the hygistor can. Open the lid to the can and if necessary, adjust the hygistor where it can be easily picked up by its edges. It is very important not to touch the tips of the hygistor as this will cause contamination. If this happens, retrieve a new radiosonde. With the discolored edge pointing outward, insert the hygistor into radiosonde so that it is equally spaced between the Styrofoam. There will be some resistance when sliding it between the wires. Again, only handle the hygistor by the edges."

Opening packaging for the Vaisala RS92-NGP

(02:13-02:42)

Narrator: "Now, the Vaisala radiosonde can be prepared. To open the package, tear along the indicated line and finish opening the wrapping. You will see that the radiosonde is enclosed within a rigid cardboard casing which helps to prevent shifting and damage to the instrument during delivery. Open the tabs and carefully remove the radiosonde, being careful not to touch the sensor boom."

Setting the frequency on the Vaisala RS92-NGP

(02:43-03:03)

Narrator: "To set the frequency, open the bottom tab and insert the plug into the bottom of the radiosonde. The cord indicates the orientation of the plug. Gently rest the radiosonde on the Frequency Setting Device to do this."

Choosing a frequency on the Frequency Setting Device

(03:04-03:48)

Narrator: “Turn the power on to the Frequency Setting Device. It should indicate that the radiosonde has been detected. The channels allow for different frequencies to be selected. Channel 1 is for the 1676 MHz frequency, Channel 2 is for 1678 MHz, Channel 3 is for 1680 MHz and Channel 4 is for 1682 MHz frequency. This process of burning the contaminants from the sensor and setting the frequency takes about 3 minutes. The Frequency Setting Device will read “Radiosonde is Ready” once this is complete.”

Battery preparation for the Sippican B2 radiosonde

(03:49-04:12)

Narrator: “Once it is time to prepare the batteries and begin the baseline process, first open the sealed battery for the B2 radiosonde by tearing the indicated edge. Remove the battery from the packaging and unwrap the cord.

Filling container with water for B2 battery

(04:13-04:33)

Narrator: “Place the battery into the water with the cord hanging outside so that it doesn’t get wet. The battery should be facing upwards. Begin filling the container with room temperature water until the battery is completely submersed. Allow the battery to soak for 2 minutes.”

Removing the battery from the water container

(04:34-05:00)

Narrator: “Then, take the battery out of the water and place it on a tray. The battery must be taken outside so that the excess water can be shaken off. Once outside, hold the battery in your hand with the top label facing towards your palm and the connector away from the water residue. Quickly snap the battery backwards to shake off the excess water for a total of 10 times.

Placing battery into the plastic bag

(05:01-05:25)

Narrator: “To prevent leakage and contamination during the flight, the battery must be placed in a clear plastic bag. Open the bag and slide the battery into the bag, although it will fit tightly. Leave the cord and connector hanging over the edge.”

Inserting the battery into the radiosonde compartment

(05:26-05:43)

Narrator: “Open the compartment next to the temperature boom and place the battery inside. Notice that the excess bag has not been rolled over and stuffed into the compartment. This flap should be folded over towards the radiosonde connector so that the battery does not overheat during the flight.”

Checking battery charge using the Radiosonde Power Supply

(05:44-06:04)

Narrator: “Plug in the connector to the Radiosonde Power Supply and place the radiosonde on a Styrofoam block. The “activate” and “battery” meter selections should be chosen on the two dials and power should be off on the Power Supply. Allow the battery time to achieve at least 17 ½ Volts. ”

Plugging in the Sippican B2 Radiosonde

(06:05-06:36)

Narrator: “Once this step is complete, the battery can be plugged into the radiosonde. Plug in the connectors beneath the plastic radiosonde casing and ensure they are secure. The flap on the plastic bag should then be threaded through the edge of the casing. This will allow for proper ventilation throughout the flight. Close the compartment lid when you are finished.”

Placing the Sippican B2 Radiosonde into the sleeve

(06:37-07:01)

Narrator: “The radiosonde can now be placed back into its paper sleeve. This is easily done by sliding it in from the top so that the temperature boom remained untouched. It is important to keep the radiosonde off of solid surfaces when the battery is plugged in.”

Setting the frequency on the Sippican B2 Radiosonde

(07:02-07:40)

Narrator: “The frequency for the Sippican B2 radiosonde can be set using one of several instruments. Lift the “Raise Frequency” tab on the outside edge of the radiosonde and remove the white plastic plug.

However, you will need this plug again so do not discard. The frequency is set by turning the instrument to the right, as indicated by the arrow printed on the sleeve. Once the frequency has been set, replace the plug into the hold and close the compartment tab.”

Deploying the sensor boom for the Vaisala RS92-NGP

(07:41-07:53)

Narrator: “To finish the Vaisala radiosonde, use your pointer fingers and open the small plastic tabs underneath the boom. With your thumbs, gently push the sensor between the tabs and secure by closing them together.”

Deploying the antenna for the Vaisala RS92-NGP

(07:54-08:06)

Narrator: “Insert the transmitter into the bottom of the radiosonde. This will lock into place. Be sure that the cord is not between the tabbed ends as this may damage the radiosonde.”

Connecting the batter for the Vaisala RS92-NGP

(08:07-08:22)

Narrator: “In one hand, hold the body of the radiosonde and in the other, the battery compartment.. The connector should be inserted into the radiosonde body. Then, firmly press the battery compartment closed so that the edges are sealed.”

Demonstration of the Vaisala RS92-NGP

(08:23-08:30)

Narrator: “Preparations for the Vaisala and B2 Radiosondes are now complete. At this point, proceed with the baseline and additional flight processes.”

Title Page

(08:31-08:41)

-No Audio-