



# Brewer Spectrometer Shipping Instructions

The Canadian Brewer Spectrometer Network

Réseau Canadien de spectrophotometric – Brewer

Updated: May 13, 2020

Version 2.0



## Brewer Spectrometer Unpacking Instructions

### All Brewer Models

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1. Remove Brewer from the shipping case
2. Remove the Brewer cover.
3. Remove the piece of foam over the control panel and place it in the zip-lock bag that was also at the control panel
4. Remove the piece of foam under the spectrometer case, between the spectrometer case and base or heat sink assembly and place it in the zip-lock bag.
5. Remove foam on the top part of the split-gear in the zenith drive and place it in the zip-lock bag.
6. Replace the Brewer cover.
7. Remove the piece of foam over the zenith prism window and place it in the zip-lock bag.
8. Remove the UV dome protector cap on the UV dome after the Brewer has been installed onto the tracker.
9. Put the zip-lock bag into the Brewer shipping case before storing.

## Brewer Spectrometer Packing Instructions

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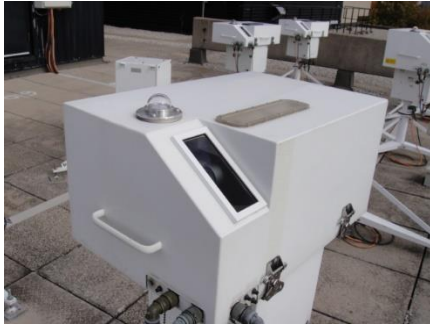
### All Brewer Models

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1. Affix the piece of stiff foam marked "Zenith Window" over the zenith prism window with electrical tape.
2. Install the UV dome protector cap over the UV quartz glass dome.
3. Remove the Brewer cover. Manually rotate the zenith prism down to the lamps by turning the gear mated to the small motor gear.
4. The piece of foam marked "Gear" has a split in it. Slide that piece of foam over the top part of the split-gear (upper most gear) in the zenith drive assembly to prevent the split gear from being damaged by impacting against the Brewer cover during travel.
5. Insert the piece of foam labeled "Under Spec. Housing", between the spectrometer case and case base or the heat sink assembly if it is an older single Brewer.
6. Place the piece of foam Marked "Viewing Window" and the bag that contained all the foam over the control panel and filter wheels.
7. Use elastics to ensure the container of desiccant inside the instrument cannot open during shipping. Also secure the desiccant tray in place with elastics or cable ties to ensure the tray cannot move around during shipping. Replace the Brewer cover
8. **Metal Case:** Open the packing case and place the Brewer into the frame which sits on the shock coils. Place the second loose frame over the Brewer. Place one strap around the Brewer length-wise and the other width-wise to secure the Brewer between the frames. Secure straps at the strap buckles and place foam between buckles and lid to protect lid from rubbing buckles. Place duct tape over each one of the packing case latches to prevent them from being torn off during shipping (latches sometimes release when the packing case is compressed).  
**Wooden Case:** Remove foam that will go on top of the Brewer and the top half of the foam pieces on the sides of the case to allow handles to go in. Place Brewer into the shipping crate. Replace the sides and top piece of foam. Screw the plywood lid back on.

## What You Will Need:

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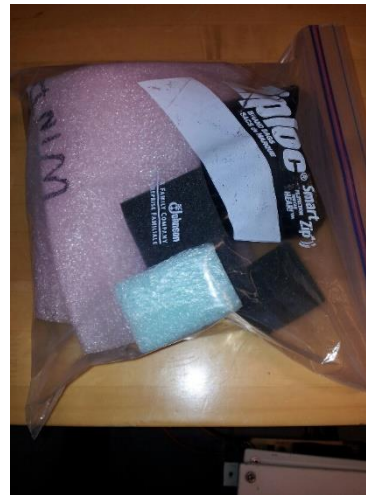
or



And:



or



And:



or

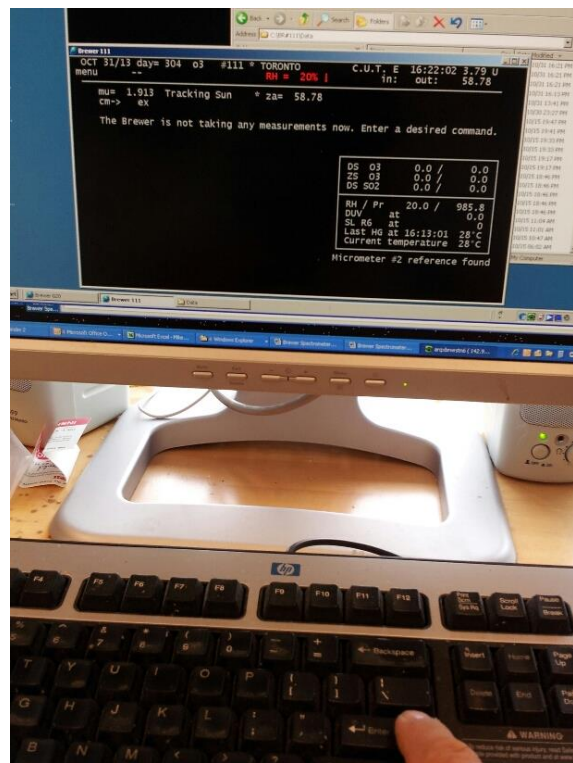
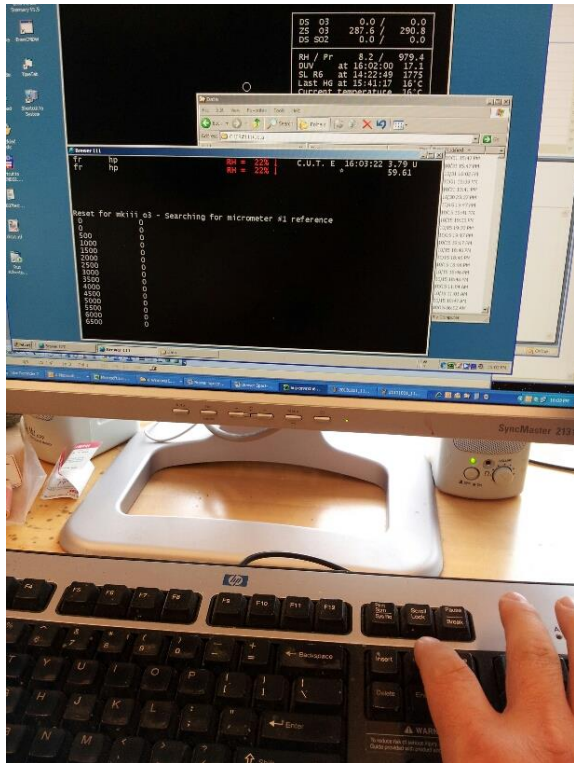


**You will also need a Hex driver set and screw driver appropriate for the screws in the wooden case**

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## To disassemble the Brewer Spectrometer :

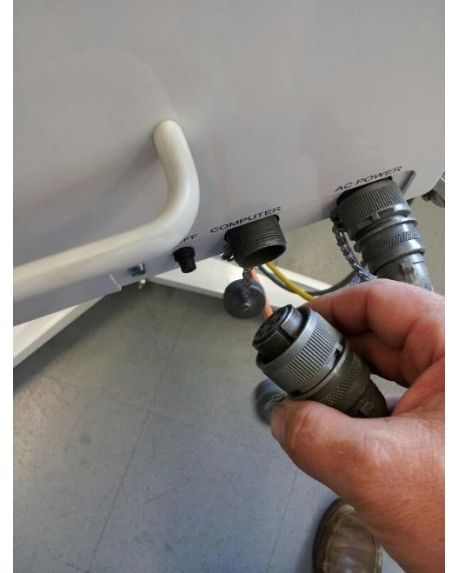
Press “Home” to have the Brewer leave scheduled mode, then at the prompt, type “EX”, ↵ to exit the program.



1. Turn off the Brewer.



2. Remove the tracker cables, starting with the Data cable (computer).
  - a. The protective caps will be linked together to protect their threads. Take the caps apart.
  - b. Turn the outer portion of the connector closest to the Brewer. This disconnects the connector from the socket on the Brewer. The knurled portion closest to the 90 degree bend in the connector will disassemble the connector itself. The connector will disconnect from the Brewer easier if you turn the inner most ring until it butts up to the outer most ring, then wiggle the connector back out of the socket on the Brewer until restricted by the inner most ring. Repeat the process until fully disconnected.



3. Use the connector plug to cap the tracker data cable to prevent moisture entry into the tracker data cable and use the Brewer data cap to cover the data bulkhead on the Brewer. This will protect the threads and keep the contacts clean and dry.



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Repeat these steps for the Azimuth cable next and finally the Power cable.

4. Install the UV dome protector cap onto the UV dome (masking or electrical tape can be used to affix a cardboard box over the dome if the protector cap is not available).



5. Next, detach the Brewer from the tracker by removing the 4 bolts that thread up into the rubber Brewer feet. The Brewer is heavy and awkward, have someone help you move the Brewer to the area you will use for packing the Brewer. The Brewer is very expensive (\$250,000) and its optics can easily be damaged by rough handling. Please treat the instrument as the fragile scientific instrument that it is.



## Brewer Spectrometer Packing Instructions

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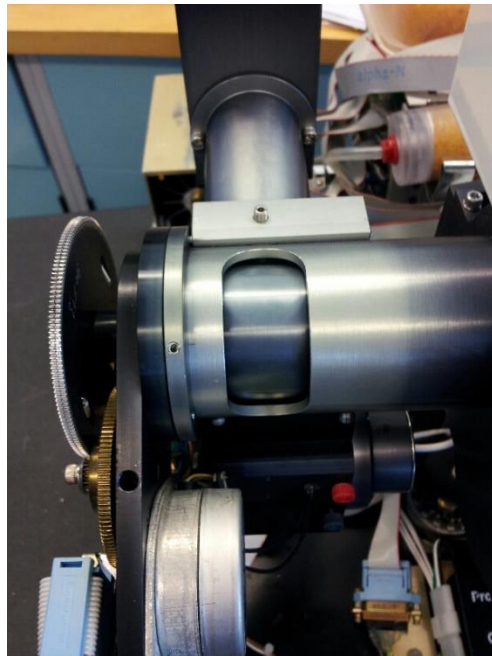
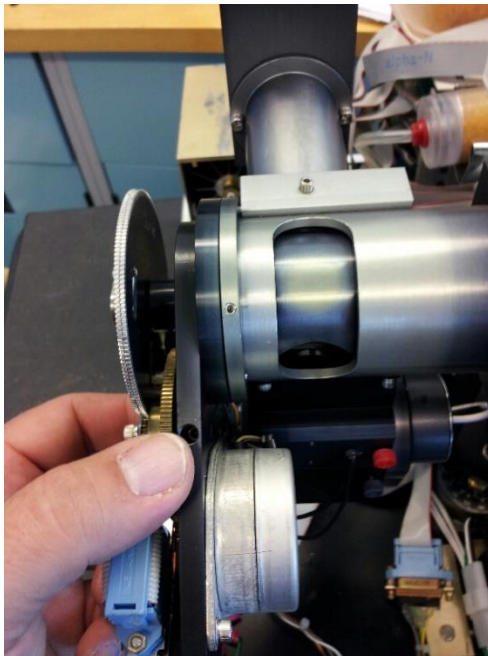
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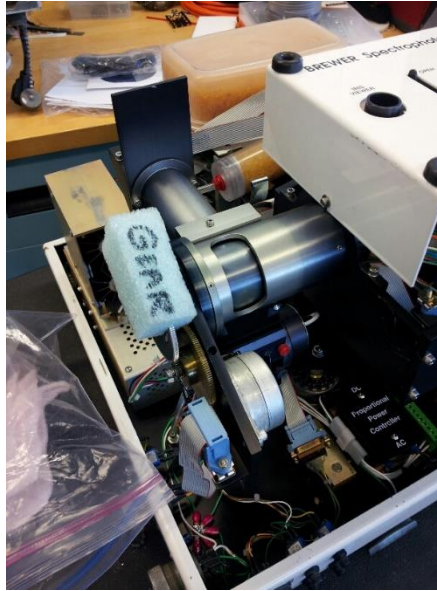
1. Affix the piece of stiff foam marked “Zenith Window” over the zenith prism window with electrical tape. Heavy cardboard, can substitute for the foam if necessary.



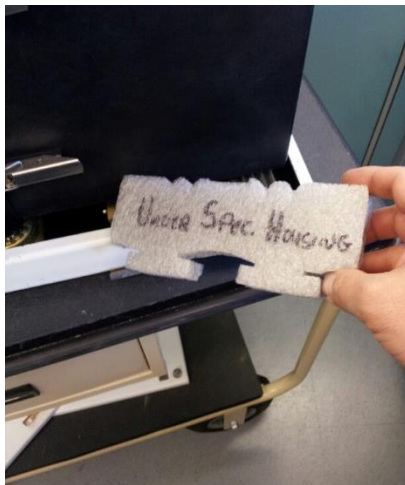
2. Remove the Brewer cover. Manually rotate the zenith prism down to the lamps by turning the brass combination gear mated to the small motor gear.



3. The piece of foam marked "Gear" has a split in it. Slide that piece of foam over the top part of the split-gear (upper most gear) in the zenith drive assembly to prevent the split gear from being damaged by impacting against the Brewer cover during travel.



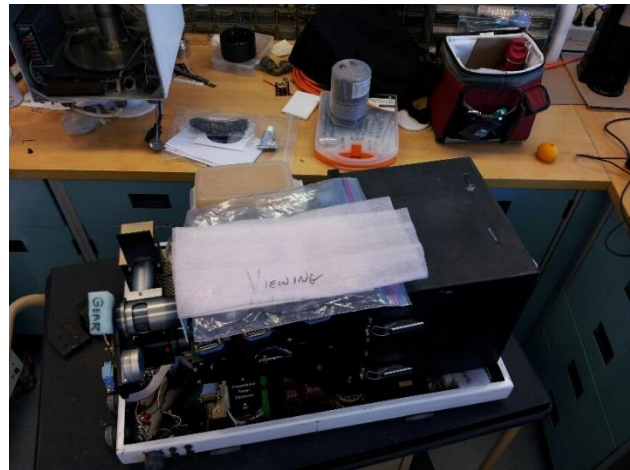
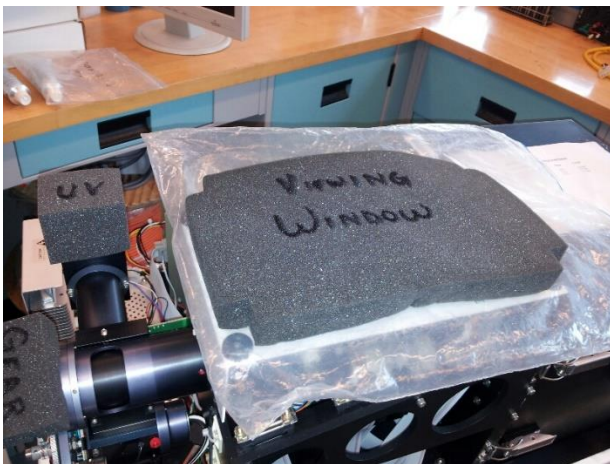
4. Insert the piece of foam labelled "Under Spec. Housing", between the spectrometer case and case base or the heat sink assembly if it is an older single Brewer.



or



5. Place the piece of foam Marked "Viewing Window" and the bag that contained all the foam over the control panel and filter wheels.



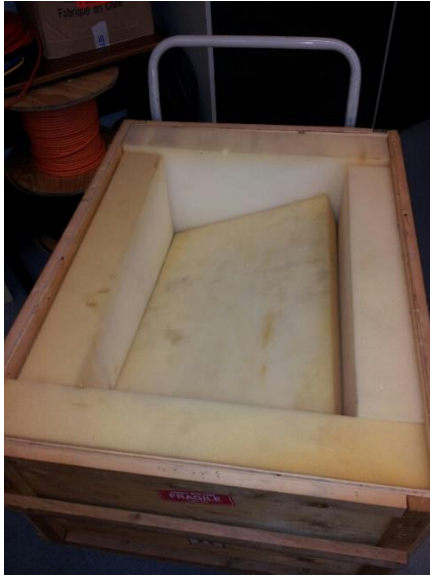
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6. Use elastics to ensure the container of desiccant inside the instrument cannot open during shipping. Also secure the desiccant tray in place with elastics or cable ties to ensure the tray cannot move around during shipping. Replace the Brewer cover

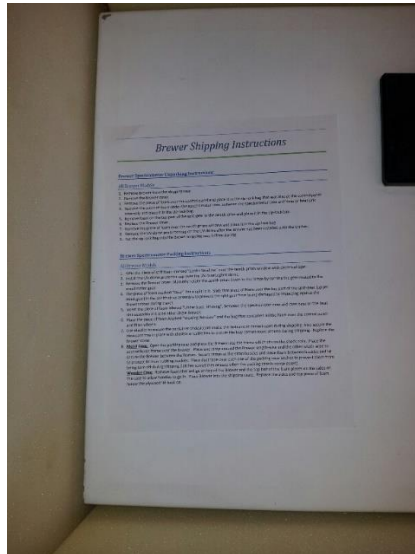


or

7. **Wooden Case:** Remove foam that will go on top of the Brewer and the top half of the foam pieces on the sides of the case to allow handles to go in.



Place Brewer into the shipping crate. Place the Shipping instructions on top of the Brewer. Replace the sides and top piece of foam. Screw the plywood lid back on.



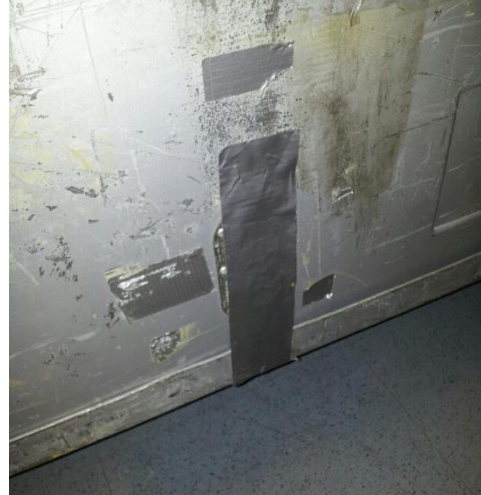
**Metal Case:** Open the packing case and place the Brewer into the frame which sits on the shock coils. Place the second loose frame over the Brewer.



Place one strap around the Brewer length-wise and the other width-wise to secure the Brewer between the frames. Secure straps at the strap buckles and place foam between buckles and lid to protect lid from rubbing buckles.



Place duct tape over each one of the packing case latches to prevent them from being torn off during shipping (latches sometimes release when the packing case is compressed).



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