Dobson Packing Instructions

Climate Monitoring and Diagnostics Laboratory

World Dobson Calibration Center
325 Broadway
R/CMDL1
Boulder, CO
80305
Important Reminders

- The Dobson MUST be packed correctly so there is no damage done in shipping.

- The box must be filled completely to reduce vibration inside the instrument.
  - Use only foam and bubble wrap to pack. Packing Peanuts provide too much waste and are difficult to discard of.
Where to start

- Locate each of these items and make a checklist so that everything is packed into the box that needs to be sent to Boulder:

1. Sun director
2. Paper copy of the current Q-Table sheet
3. Encoder with plate and screws that secure it
4. Counter
5. Standard lamp holder and cords
6. Standard lamps
7. Microammeter
8. R-dial
9. C-stops
10. Power cord for Dobson
   - Should be placed inside one of the Dobson’s large holes
Packing Preparation

- Locate lots of bubble wrap and foam packing material
  - **NO PACKING PEANUTS**
- Gather a full pack of Allen Wrenches
- One large flat head screw driver
- Packing tape
- Plastic sandwich bags to put screws and C-stops into

Allen wrench for removing set screw on encoder

Dobson completely taped with wrapped accessories
Removing the Encoder

The encoder connects to the R-dial through a bellows connector, and to the Dobson lid through a \(\frac{1}{4}-20\) bolt. The three big screws are leveling screws – **do not loosen these screws**.
Removing the Encoder

Use Allen wrench to loosen set screw (may be two screws)

Once set screw is loose, use a flat head screwdriver to remove large bolt that attaches the encoder to the Dobson

Once large bolt has been removed, carefully lift the encoder straight off the Dobson

After removing the encoder, loosen and remove the screw that holds the R-dial on. Remove R-dial
Taping up the Dobson

Certain areas on the Dobson need to be protected when shipping.

- When packing you need to tape:
  1. The R-dial on top of the Dobson, using a paper towel to cushion (NUMBERS DOWN)
  2. The inlet hole and surroundings
  3. The R-dial unit. Tape both directions, and then replace the large set screw on top of the tape job
  4. All bolts and or other removed parts from the Dobson
  5. The C-stops (if available)
Final Preparation

- Before placing the Dobson in the shipping box, make sure that the Long Rod is pushed all the way in.
- Q-levers are all the way down, and C-stops are removed.
- The thermometer stays inside the instrument.
- The power cord has been inserted inside the holes under the instrument.
Preparing the Dobson

Q-levers in the down position
Tape the R-dial shaft so it will not move
Power Cord goes here
Long Rod in all the way!

Thermometer remains in the instrument
Packing the Dobson

- Place the Dobson in the box so that the back of the instrument touches the back of the box.

Area for packing the meter, sun director, encoder, counter, lamps, lamp holder, etc.
Wrapping Dobson Accessories

- Wrap up all cords as well as accessories
- Tape down any loose parts, like the shield on the lamp holder
- Pack all items so that the Dobson box is completely full

- With bubble wrap or foam, securely wrap all Dobson accessories
- Keep track of items before putting them into the shipping container
- After all items are wrapped, place in front of the Dobson occupying as much space as possible to reduce vibration inside the box
Final Preparation

- Fill in all remaining space with foam or bubble wrap
- The Dobson box should be filled completely with foam to the level of the top lid
- Once packed completely, the large solid piece of foam should be placed over the entire Dobson unit before closing the box
Shipping

- Close the lid and use cable-ties to secure the locks into place
- Send back the instrument collect to:

  World Dobson Calibration Center
  c/o Brooke Walsh or Bob Evans
  325 Broadway
  R/CMDL1
  Boulder, CO 80305

- Tell the shippers to “Convert to GBL at Destination”
- Send an email to Brooke.Walsh@noaa.gov or Robert.D.Evans@noaa.gov with the details of the shipment