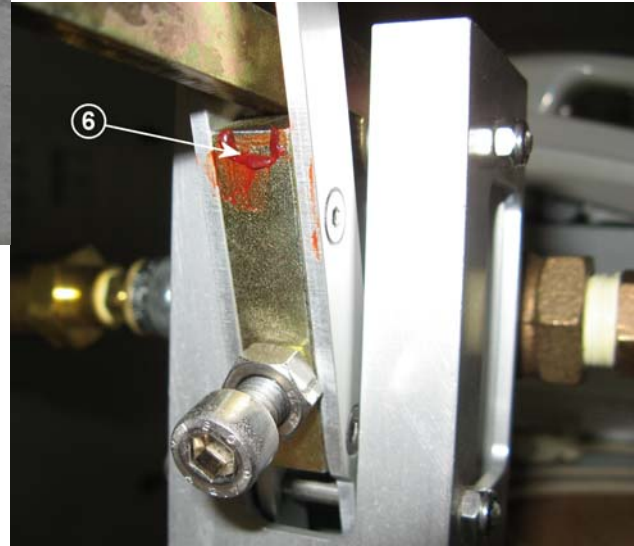


1. Remove the inflation kit from the transportation case.
2. Connect the balloon nozzle and hose (1) to the output side of the shut-off valve.
3. Connect the input hose (2) to the input side of the shut-off valve.

4. Connect the regulator assembly to the Helium tank, then connect the input hose to the output of the regulator.

CAUTION

Do not exceed 45 PSI output pressure.



5. Lift the weight lever arm (3). Apply a small amount of grease (6) where the vertical valve control arm (4) meets the weight lever arm.
6. Pull back on the vertical valve control arm and allow the weight lever arm to fall.
7. Select the amount of weight (5) appropriate for the flight. Options include parachutes, pibal lights, and de-reelers. The iMet-1 radiosonde weighs approximately 260 gm.
 $850\text{ gm} + \text{Radiosonde}_{\text{Mass}} + \text{Options} + \text{Conditions} = ?$
8. Attach the balloon to the nozzle and begin inflation by opening the gas valve on the tank. Adjust the output pressure to 10-12 PSI and lock adjusting knob.
9. Once the balloon reaches the appropriate lift, the balloon will lift the weight lever arm, shutting off the gas supply to the balloon. Note: if used outdoors, wind may cause the weights to be lifted prematurely.
10. Close the gas valve on the tank. Briefly pull back the vertical valve control arm (4) to relieve the pressure in the inflation system.

Condition/Option	Add'l Weight
Rain	
Light	+100 gm
Moderate	+200 gm
Heavy	+300 gm
Icing	
Moderate	+300 gm
Severe	+500 gm
High Surface Wind	
>25 kts (>12.5 m/s)	+100 gm
>40 kts (>20.5 m/s)	+200-300 gm
Parachute	≈70 gm
De-Reeler	≈50 gm
iMet-1 Radiosonde	260 gm

NOTE

Do not use the shut-off valve to close the gas supply. The tank's gas valve is the only valve designed to prevent gas from leaking.

11. Tie off the balloon and remove the nozzle from the balloon. The balloon is now ready for flight.

Cloud Code and Weather Code Group Format:: $N_h C_L h C_M C_H WWWW$

Clouds are divided into three families, classified as low, middle, or high. The general height ranges for these are: surface to 6500 feet for low; 6500 feet to 20000 feet for middle; and above 20000 feet for high. These ranges are not absolute, but given as a guide only. More consideration may be given to the cloud form than the height in many cases. Each cloud family is coded with a single digit, 0 through 9. The code figure 0 is used to indicate that clouds are not present for a given family.

- a. N_h = Amount (in oktas) of the sky covered by all low clouds (C_L) observed or the amount of sky covered by all the middle clouds (C_M) observed. In no case will the amounts of the low and middle clouds be combined to report N_h

Note: If there are any breaks in the sky at all, such as an overcast with a mackerel sky (altocumulus perlucidus or stratocumulus perlucidus), N_h would be encoded as 7. If there are only a few patches of low or middle cloud in the sky, N_h cannot be encoded as 0 but is encoded as 1. A partial obscuration does not affect the coding of N_h . A total obscuration by fog or other phenomena meteorological is coded as 9, not 8 (overcast sky).

- b. C_L = Type of low cloud. A solidus (/) is reported if C_L clouds are not visible owing to fog or similar obscuring phenomena.
- c. h = Height of the base of the lowest cloud observed. The height reported is with respect to the surface. The height is coded as a solidus (/) if there is a total surface-based obscuration that prevents an observation of the clouds.

Table 1: Height of Cloud Base above Ground, h

Code Figure	Reportable Heights (ft)	Reportable Heights (m)
0	0 to 100	0 to 49
1	200 to 300	50 to 99
2	400 to 600	100 to 199
3	700 to 900	200 to 299
4	1000 to 1900	300 to 599
5	2000 to 3200	600 to 999
6	3300 to 4900	1000 to 1499
7	5000 to 6500	1500 to 1999
8	7000 to 8000	2000 to 2499
9	8500 or higher or no clouds	2500 or higher or no clouds
/	Unknown or base of clouds below surface of station	

Note: This group is used to report the height of the base of the lowest cloud seen, regardless of cloud amount. The height reported is with respect to the surface.

- d. C_M = Type of middle cloud. A solidus (/) is reported if C_M clouds are not visible owing to fog or similar obscuring phenomena, or because of a continuous layer of lower clouds.
- e. C_H = Type of high cloud. A solidus (/) is reported if C_H clouds are not visible owing to fog or similar obscuring phenomena, or because of a continuous layer of lower clouds.
- f. **WWWW** = Present weather coded in two groups of **WW**. The coding starts with 99 (the highest priority) and descends to 00 (the lowest priority). Note that code figure 17 is placed out of numerical sequence to highlight its relative coding priority. You should note that present weather codes for some weather phenomena are events that have occurred during the past hour, not at observation time. When entering **WWWW**, use the first and second applicable code figures. Note that two **WW** groups must **always** be coded, even if that means using the same code figure twice.