Attention

Why do I keep getting off track up here? When I took off there was barely any wind.

Objective

To know how to read wind aloft.

Schedule

Ground instruction – 10 minutes

Reference Material

http://www.gleim.com

Material

Example used for purposes of discussion:
FT 3000 6000 9000 12000 18000 24000 30000 34000 39000
STL 2113 2325+07 2332+02 2339-04 2356-16 2373-27 239440 730649 731960

A four-digit group shows wind direction, in reference to true north, and wind speed.

a. The first two digits give direction in tens of degrees, and the second two digits are the wind speed in knots.

b. Look at the St. Louis (STL) forecast for 3,000 ft. The group 2113 means the wind is from 210° true at 13 kt.

2. A six-digit group includes forecast temperatures.

a. In the STL forecast, the coded group for 9,000 ft. is 2332+02.
The wind is from 230° true at 32 kt., and the temperature is plus 2°C.

3. If the wind speed is forecast to be from 100 to 199 kt., the forecaster will add 50 to the wind direction and subtract 100 from the wind speed. To decode, you must subtract 50 from the wind direction and add 100 to the wind speed.

a. In the STL forecast, the coded group at 39,000 ft. is 731960.
The wind is from 230° true (73 − 50 = 23) at 119 kt. (100 + 19 = 119), and the temperature is −60°C.

b. If the wind direction is between 51 and 86, the wind speed will be 100 kt. or more.

4. If the wind speed is forecast to be 200 kt. or greater, the wind group is coded at 199 kt.

a. EXAMPLE: 7799 is decoded as 270° true at 199 kt. or greater.

5. When the forecast speed is less than 5 kt., the coded group is 9900 and is read “LIGHT AND VARIABLE.”

To find the temperature relative to ISA, multiply the standard temperature lapse rate (-2°C per 1,000 feet) times the altitude in thousands of feet, then add +15°C for standard day conditions:
Using -27 @ 24000
1. -2°C x 24 = -48°C
2. -48°C + 15 = -33°C (ISA)
Therefore, -27°C (today) is 6°C warmer than -33°C, so the temperature is ISA + 6°C.