

array 4 heights

ref3 is ~1.505m above top of profile's plate.
center of sonic is 0.053m above top of boom
TRH is 0.37m below top of boom, thus top of TRH boom should be 0.42m above top of sonic boom.

In array 4:

- East side of array is has height of the top of 1b's boom 5.37m above ref4
- We set upwind's sonics to this same top of boom (plate) being 5.37m above Ref4
- Ref4 is 0.040m above Ref3
- Ref3 is 0.027m above top of "1.55m" sonic
- THUS,
 - + profile "7m" top of sonic boom should be 5.447m above "1.55m" sonic.
 - + profile "8m" top of sonic boom should be 6.447m above "1.55m" sonic.
 - + profile "7m" top of TRH boom should be 5.447m + 0.42m = 5.867 above "1.55m" sonic.
 - + profile "8m" top of TRH boom should be 6.447m + 0.42m = 6.867 above "1.55m" sonic.

Our measurements of profile:

- 1.55m top sonic boom is -0.027m below ref3
(remaining entries are with respect to top of 1.55m sonic boom)
sonic TRH
1.55 0.000 0.376
3.x 2.140 2.542
4.x 3.352 3.749
5.x 4.286 4.710
7.x 5.582 5.886
8.x 6.508 6.878

Note that 7.x TRH of 5.886m is 2.1cm higher than desired and 8.x TRH of 6.787 is 1.1cm higher than desired. We can't move the 7.x TRH lower due to Rohn internal braces, thus, we'll leave both of these.

Numbers "AGL":
1.55 1.555 1.511
3.x 3.695 3.677
4.x 4.907 4.884
5.x 5.841 5.845
7.x 7.137 7.021
8.x 8.063 8.013
others 7.002

Tabulating the profile heights:

nominal ht	sonic*	+1. 55m	SHT*	+1.55m-0.42 m
1.5m	0.0	1.55m	0.376	1.51m
3m	2.140m	3.69m	2.542	3.67m
4m	3.352m	4.90m	3.749	4.88m
5.5m	4.286m	5.84m	4.710	5.84m
7m	5.582m	7.13m	5.886	7.02
8m	6.508m	8.06m	6.878	8.01

- height wrt 1.5m sonic boom