The BlueFly Buzzer

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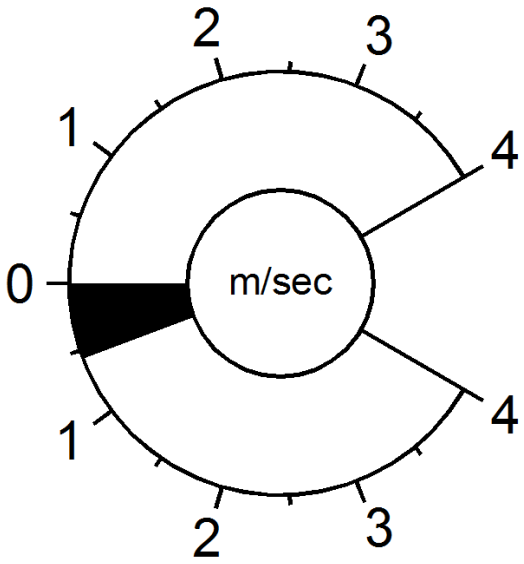
Some conversations on the hill or in the landing field have recently gone like this:

Pilot: “What's that horrible noise?”
Me: “It's the Bluefly buzzer””
Pilot: “Can't you turn it off? I couldn't listen to that all the time”.

Having had this conversation a number of times I am afraid I sometimes answer something like: “ You don't have to.” However, I usually try not to be quite so grumpy and attempt to explain how the Bluefly “buzzer” works.

Light Lift

First let's have a look at the concept of “light lift”. For the purposes of this article I will define “light lift” as lift which is strong enough to reduce our rate of sink from the still air value, but not give us a climb. Our vario will show something like this:



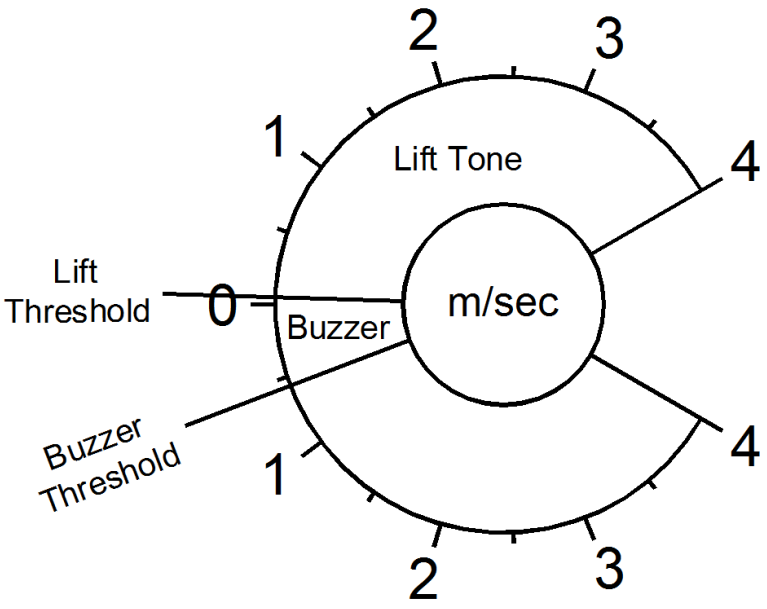
If our sink audio is off or set as a sink alarm we will hear nothing.

“Light lift” can be just a weak thermal or other area of weak lift which we might want to ignore. However it may indicate the presence of a stronger thermal core or area of lift nearby in which case we may want to explore and see if we can do better. If we have our sink threshold adjustment set so that the sink tone makes sound in this region we may be able to listen to it to find the stronger lift. However there are other developments which can help.

Growlers And Buzzers

Nothing to do with bears or bees! In addition to the usual “lift” and “sink” tones some manufacturers have a third type of tone described as a “buzzer”, “growler” or “near-thermal tone” specifically for this “light lift” region. This tone is different from lift and sink tones and is intended to help us feel our way into the strongest area of a weak thermal.

The “buzzer” on the Bluefly vario operates from a settable threshold upwards to the lift tone threshold at which point the lift tone takes over. On my Bluefly vario I have the lift threshold set to 0.05 m/s and the buzzer threshold set to -0.6 m/s. (On the Bluefly that is 0.6 m/s below the lift threshold.) With this setting if I approach a thermal from still air the buzzer will begin to sound when my sink rate reduces to about 0.55 m/s.



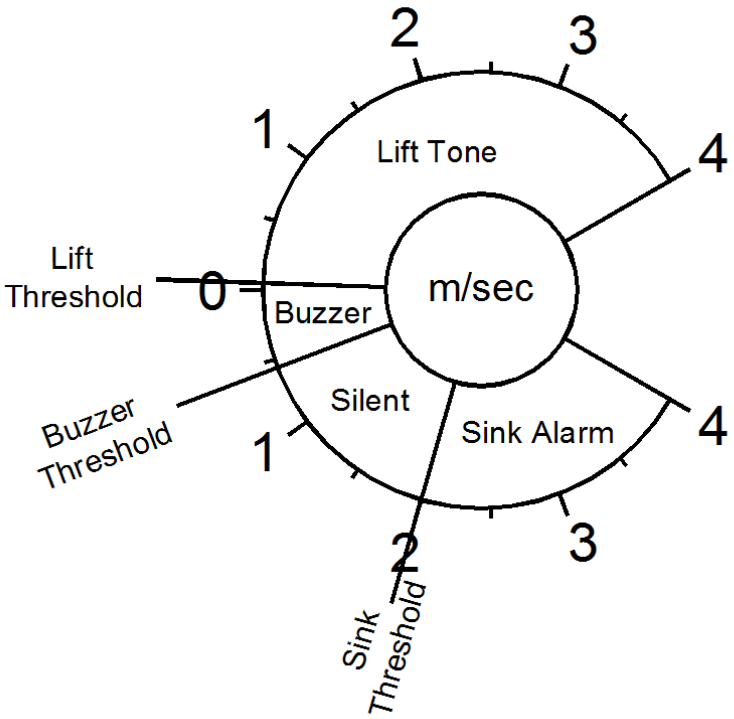
The buzzer tone frequency increases as my sink rate reduces until I get an actual climb and the lift tone takes over.

Do I have to listen to it all the time? No. When airborne it only makes sound in air conditions for which it is intended. In strong thermal conditions it only sounds very briefly as I enter the thermal after which the normal lift tone takes over. It can sound for quite a lot of the time in smooth ridge lift when, as with thermals, I can use it to “feel” for stronger lift to give me a climb.

Sink Audio

If we are using a “growler” or “buzzer” how should we set our “down” audio? I started with the sink audio set normally but with the threshold at about -1.1 m/s, approximately the sink rate of a glider in still air. However I found that, in conjunction with the buzzer, it often confused me. After some

experimentation I set the down audio to work as a sink alarm with the sink threshold at -2 m/s and the sink frequency increment at 0 (zero). This allows for the sink rate of the glider plus a bit for manoeuvering and turbulence. When it sounds I know I am in actual sinking air.



These are, of course, my own preferences at this time. Instrument settings are a very personal thing. We should be prepared to experiment.

Does It Work?

Some pilots think so. The purpose of the buzzer and similar tones is to exploit weak lift and I think the Bluefly buzzer helps me to do so. However vario audio is very personal so they will not suit everybody. It takes a bit of work to sort out the best settings and to understand how to use them.

A down side of "growlers" and "buzzers" is that they make a noise at take off while waiting to launch and on the ground after landing. As well as attracting adverse comments this discourages many pilots from trying them even though, when airborne, they only sound in the region for which they are designed. As with all new developments we should try to keep an open mind.

Footnote: I am told the Bluefly has just had an "auto buzzer start" feature added to its firmware which allows the buzzer to be muted in the launch area until it detects a take off. That should save some ear fatigue in more ways than one!