

Electronic Search with the Becker and G1000

1 Prerequisites

1.1 Know your equipment.

- 1.1.1 Be able to quickly set a user waypoint on the G1000 at your current position.**
- 1.1.2 Be able to set a user waypoint based on a lat-long.**
- 1.1.3 Know how to use OBS mode.**
- 1.1.4 Understand that the Becker will give you a best guess direction even with NO signal. Don't get fooled, use the marbles.**
- 1.1.5 Understand how to go split on comms.**

1.2 Prepare

- 1.2.1 What is the terrain in the area of the merge? What direction and altitude gives the best chance to pick up the signal.**
- 1.2.2 Have a plan of attack. Consider airspace, terrain, weather, and other issues for safe flight.**

2 Setup

2.1 Center console

- 2.1.1 FM/UHF switch to FM**
- 2.1.2 Comm seat 2/3 switch to 2 (so observer uses the radio)**

2.2 Becker

- 2.2.1 in EMERGENCY mode, 121.5MHz.**
- 2.2.2 Use Becker page with full ring (not arc).**

2.3 G1000

- 2.3.1 Clear all user waypoints before launch**

3 Before Signal is Acquired

- 3.1 Go high. You're not going to out-climb the satellite! Think 8,500 or***

higher. If the target may be in terrain, go as high as you can legally go.

3.2 *Set a waypoint (“M1”) on the G1000 at the first merge. As new merges are received, add “M2”, etc.*

3.3 *Always listen to Com2 on 121.5. De-squelch and set volume so hiss is audible. The aircraft com radio is often more sensitive than the Becker.*

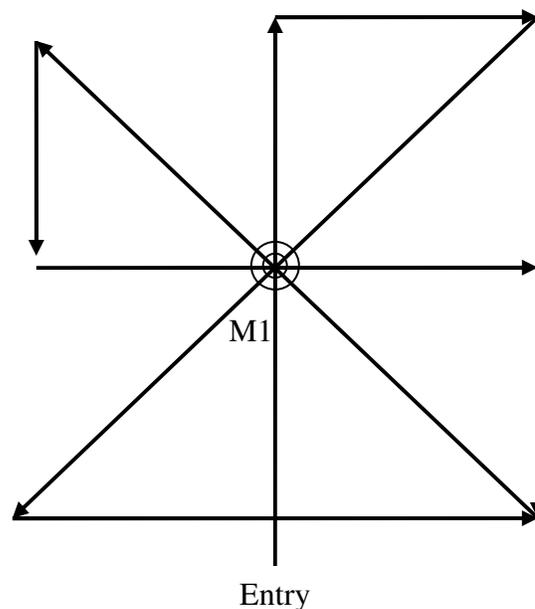
3.4 *Set the squelch on the Becker slightly below the noise level. Ignore the direction info until the clear “marbles” are within about +/-30 degrees of solid marble.*

3.5 *Periodically check 243MHz. If signal is detected on 243, you may get better direction information due to the shorter wavelength.*

3.6 *Beware that the signal may be carrier only. No problem! The Becker can’t tell the difference.*

4 Signal NOT Acquired

4.1 *If signal is not detected by the merge, use OBS mode off the merge waypoint to fly 30 mile passes (15 miles from the merge) across the merge at 45 degree passes.*



5 Signal IS Acquired

5.1 *When the signal is heard, use wing shielding to determine direction until the signal strength is high enough for the Becker.*

5.2 *Once the Becker is locked in – just follow it!*

6 End Game

6.1 *Keep the relative bearing 001-005 degrees. When passing the signal, set a waypoint (“A”).*

6.2 *Use OBS mode off of “A” and re-approach target 180 degrees off first pass. Again, keep 001-005 relative bearing and mark a waypoint on passing.*

6.3 *Repeat from various directions and mark position on each passing (“B”, “C”, etc.) until confident in location.*

6.4 *If terrain allows, getting lower (as low as 1000 AGL) will give you a better position.*

6.5 *If you are correct, you should be able to circle the position and the Becker should show it continuously to the inside of the turn.*

7 Other Thoughts

7.1 *The signal will ebb and flow, so look for the big trends. You may see the signal strength rise, and then drop off. Keep going a while; it may come back even stronger.*

7.2 *Initial direction indications can be way off because of terrain masking and reflections. If you keep getting higher signal strength, you will eventually get there.*

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