

From: Tom Lusch <tomlusch@yahoo.com>
Subject: **Re: Sort box schematic**
Date: December 28, 2009 10:29:07 PM EST
To: John Farmer <bcr@bluecollarrepublican.com>
Cc: Glen Schulze <g_schulze@msn.com>

John,

The link to the following document...

<http://www.scribd.com/doc/13950396/T8-B3-FAA-GI-Region-Fdr-AA-77-Radar-Info-Emails-Withdrawal-Notice-Memo-and-Questions>

...doesn't exactly show us the sort box boundaries, nor does it tell us how each sort box was adapted (all the radar sites that were assigned, and in what order they were assigned), but it is a very rich source of information regarding the radar sort boxes in the area of AAL77's disappearance.

Tom

From: Tom Lusch <tomlusch@yahoo.com>
To: BCR <bcr@bluecollarrepublican.com>
Cc: Schulze Glen <g_schulze@msn.com>
Sent: Wed, December 23, 2009 2:36:26 AM
Subject: Re: Sort box schematic

John,

I had cc'd you (on Sep 14th) with a slightly earlier version of the attached draft. This attachment doesn't have graphics, but I included notations about where the radar sort box boundaries were in relation to AAL77.

One of the things that I feel is *an extremely important aspect to bring to light* concerning the NTAPs that you obtained via the FOIA process, is that AAL77 was displayed to ZDC controllers as a "weak" primary along the greater portion of its return to the Pentagon. For instance, concerning ZDC I calculated "Out of 197 possible target symbols displayed from 12:58:44, 59 (30%) were Long Run Length Primary, 129 (65%) were Short Run Length Primary, and 9 (5%) had no symbols (missed hits?)." The fact that 70% of the time AAL77 appeared on the ZDC display like "clutter" or "anomalous propagation" would certainly explain why any ZDC Low-Altitude controller looking at their ZDC display would have not readily noticed a B757 with its transponder turned off, rapidly

moving east towards Washington D.C.

I *believe* that abysmal performance is directly related to the what I found when I correlated the Target Run Lengths in the COMDIG with the displayed symbols, which showed Target Run Lengths of 13, 14, & 15 appearing as a strong "+" symbol, whereas Target Run Lengths of 9, 10, 11, 12, as well as strong values of 16, 17, 18, and 19, displayed as a weak "." symbol.

It *appears* to me that there *may be* a software error in the ARTCC presentation of primary targets, and that this LATENT ERROR *may* have existed all along! This possible coding error may explain a lot as to why Center controllers rarely have faith in tracking a primary-only targets. I know from the 11 years I worked at ZOB, I was always amazed at the amount of clutter on our screen, yet baffled as to how when an airplane had a transponder that became inoperative, it would not show up as a consistently strong primary return.

I encourage you to dig deeper into these aspects of the presentation of AAL77 as a primary target, confirm my initial findings for yourself, and build upon that for your book. I would certainly be able to guide you along this path.

I would be doing more, but I simply have scant time to pursue this. My latest intent was to take some vacation days in January (while my 3-year old son would be in daycare), as that is the only way I can have a block of time to concentrate without distraction. :)

Tom

On Dec 22, 2009, at 3:10 PM, Tom Lusch wrote:

John,

The NTAP data shows the position of AAL77 in both X and Y coordinates (as well as Latitude/Longitude coordinates). I pretty sure Glen did some of his plots using the X/Y data, but I'm at work, at don't have my files handy.

With the X/Y data, one can draw lines at every multiple of 16 and "see" the boundaries of the radar sort boxes.

My desire is to have a plot of these points, but to make each of those points correlate with the "." symbols (weak "short run length" primary target) and "+" symbols (strong "long run length" primary targets), so as to illustrate how AAL77 was so poorly displayed.

Tom

From: BCR <bcr@bluecollarrepublican.com>

To: Tom Lusch <tomlusch@yahoo.com>

Cc: Schulze Glen <g_schulze@msn.com>

Sent: Tue, December 22, 2009 2:16:09 PM

Subject: Sort box schematic

Tom,

Do you have a graphic for the sort box(s) involved in the AAL77 incident? It would be nice to have some specific boundaries for the sort boxes in the HNN area.

John