



Multiple Transducer Editing in MBMAX64

By Mike Kalmbach

Multiple transducer editing is available in version 13.0.32. Editing has been tested on Ross Smart Sweep data, works great, and should be fine with all MT systems. The calculations are the same for all systems and very much simplified compared to multibeam.

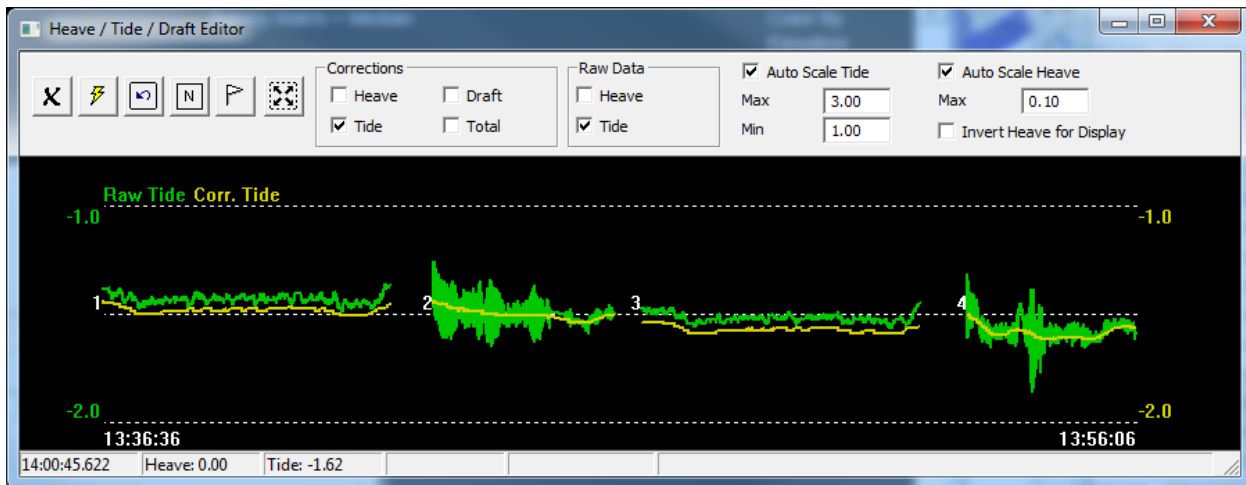
Open files as you would with multibeam, set up corrections, check device settings, etc. The difference with multiple transducer is in the offsets (figure 1). A simple grid display shows the offsets used at survey time and allows modification for depth editing.

FIGURE 1. Check / modify transducer offsets.

Transducer	Starboard	Forward	Draft	Pitch	Roll	Latency
1	-10.040	4.210	-0.160	0.00	0.00	0.000
2	-8.420	4.220	-0.180	0.00	0.00	0.000
3	-6.780	4.240	-0.180	0.00	0.00	0.000
4	-5.200	4.250	-0.210	0.00	0.00	0.000
5	-3.570	4.260	-0.230	0.00	0.00	0.000
6	-1.790	4.330	-0.040	0.00	0.00	0.000
7	-0.020	4.580	0.000	0.00	0.00	0.000
8	1.780	4.340	-0.040	0.00	0.00	0.000
9	3.570	4.270	-0.230	0.00	0.00	0.000
10	5.190	4.270	-0.250	0.00	0.00	0.000

MBMAX64 has improved RTK tide editing (figure 2). Multiple transducer folks can now take advantage of it!

FIGURE 2. The RTK tide editor displays multiple survey lines, showing the trend over the course of the survey. MBMAX32 displayed one line at a time and tide trend was not apparent.



Depth editing in MBMAX64 is greatly improved. Some examples: Point cloud editing (figure 3), matrix / sounding overlay (figure 4) and extended color options (figure 5).

FIGURE 3. Popup point cloud editor. Shown with vertical exaggeration of 14 to 1 and sounding color by transducer number.

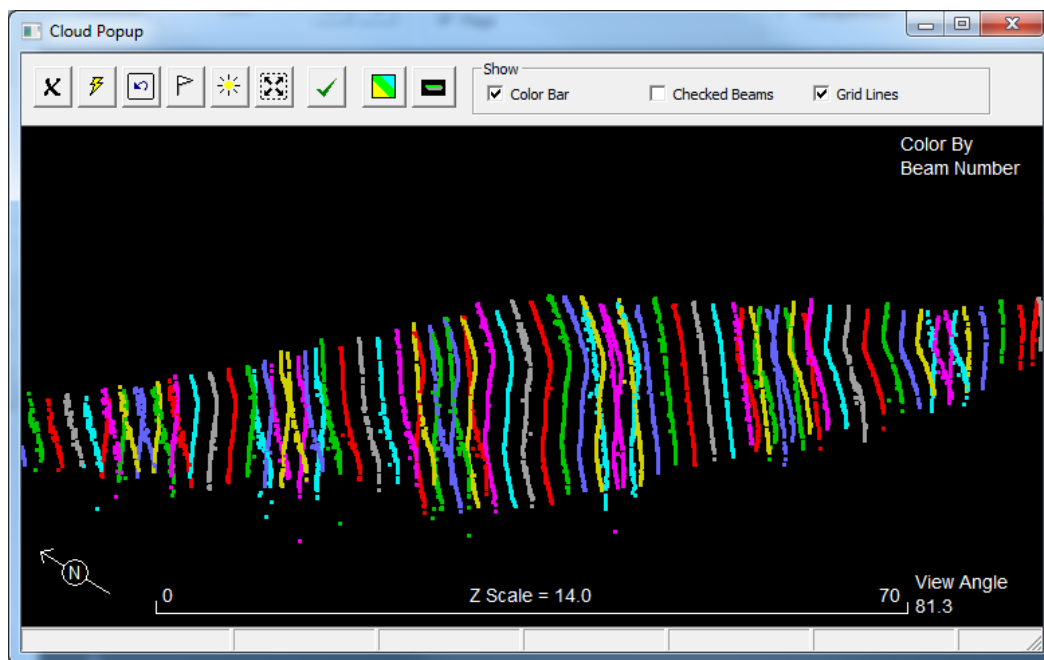


FIGURE 4. Profile editor with matrix depth (median in this case) overlaid on soundings. If you are interested in median, it's a waste of time to edit the sounding cloud. Won't affect the median at all!

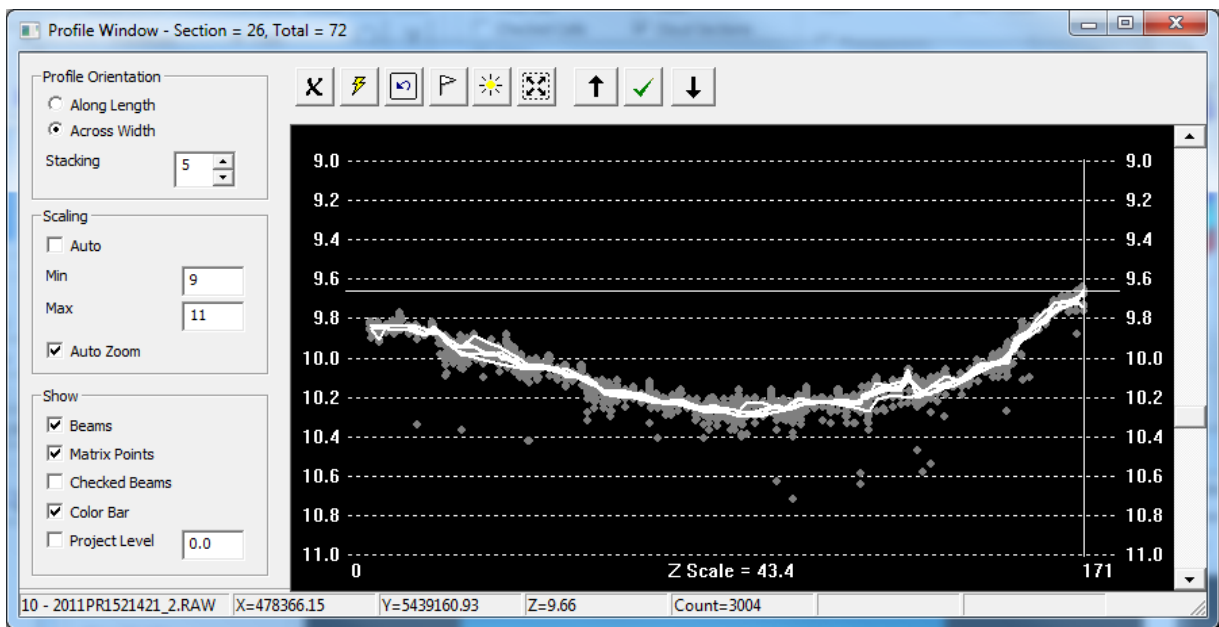
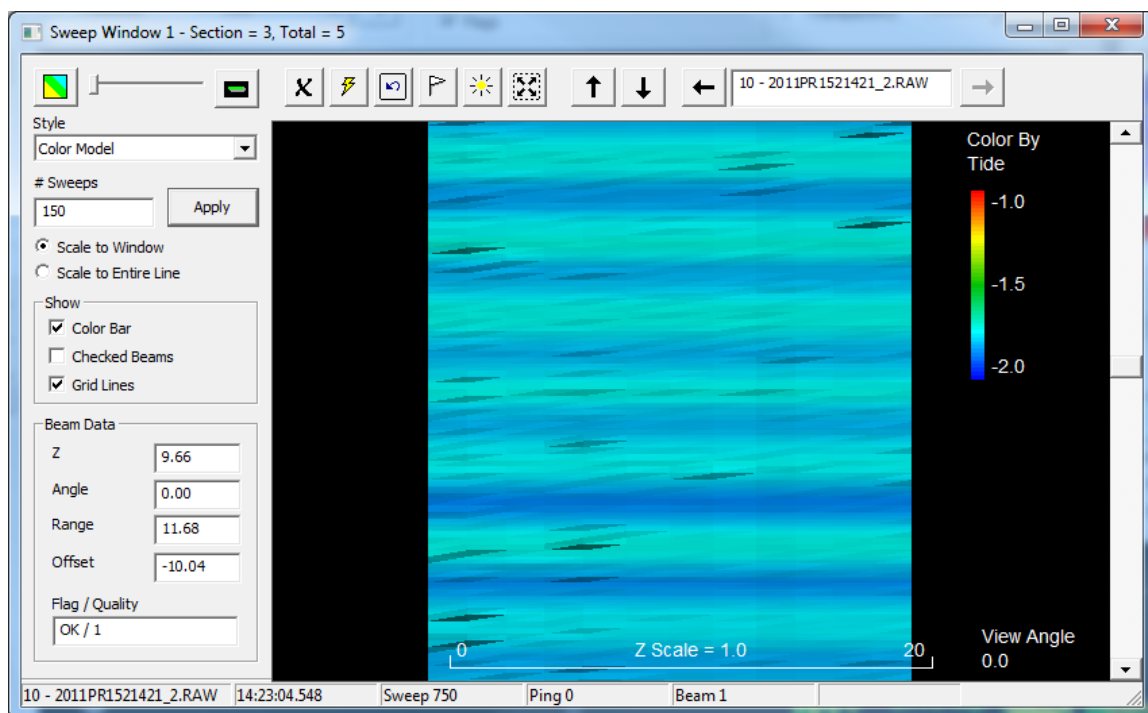


FIGURE 5. Sweep window with extended color option (tide level). The ripples show all is not well with the tide correction. Easily fixed by averaging RTK tide points.



MBMAX64 allows modification of any data at any stage of editing. For example, changing GPS antenna offsets after half the depth editing is complete (oops). The program

automatically uses the new offsets to recalculate RTK tide levels and update soundings. MBMAX32 didn't do that. You had to reload the files.

In summary, MBMAX64 is a much better program than MBMAX32 and it now edits multiple transducer data. Unfortunately, there's a learning curve. That's the trade-off. I can say though, that people who take the time to learn MBMAX64 don't go back. So it's worth it if you have the time.

The other thing is this; all new development will go into 64 bit. So while MBMAX32 won't be going away soon, it won't be getting improved either.