

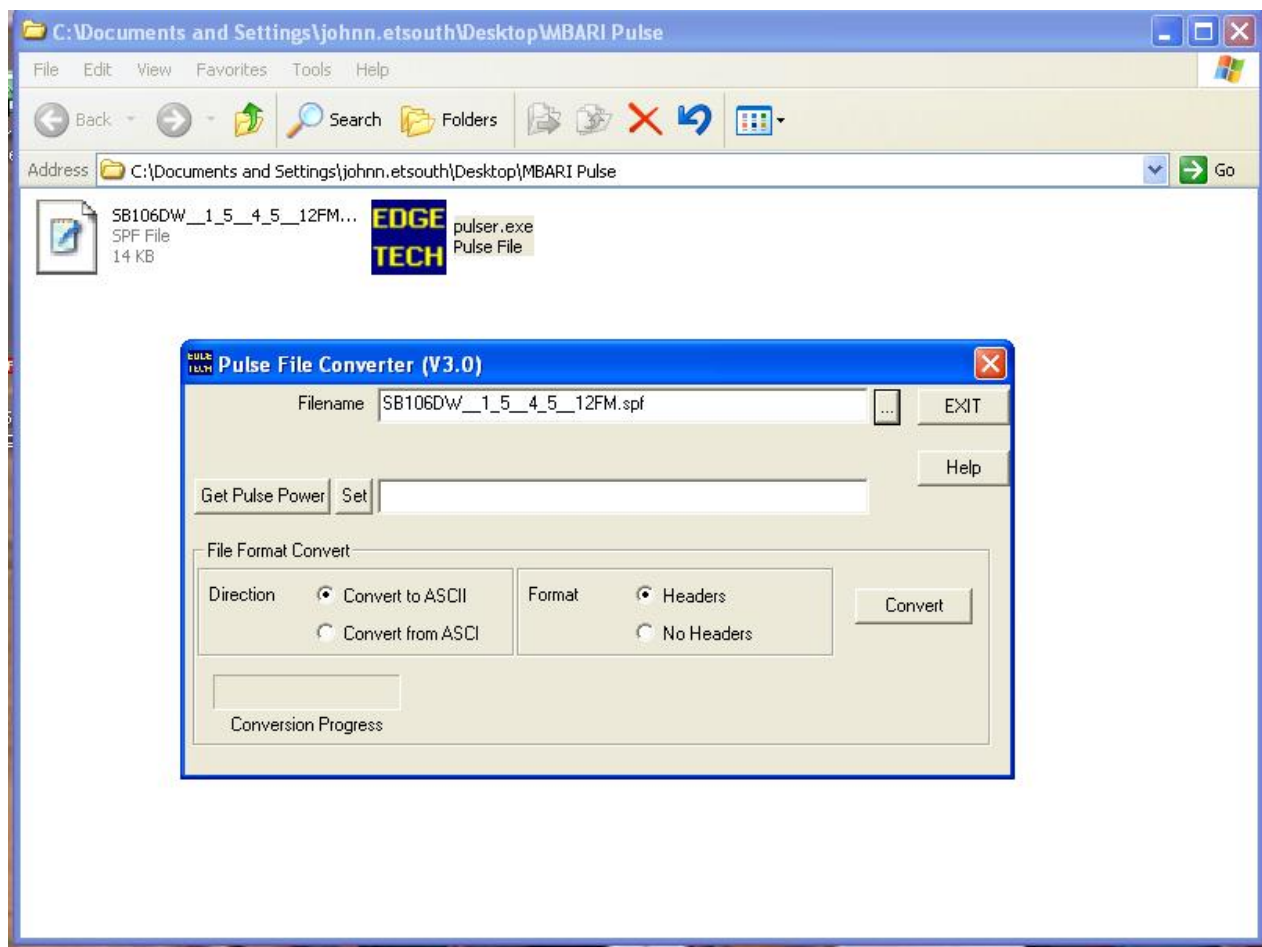
Purpose:**To Reduce the Direct Path Reverberation via Annihilation within the Sub Bottom Pulse**

To change the annihilation setting in the sub bottom pulse you must perform the following steps:

Locate the pulse file in the sonar folder\Sub bottom pulse folder then you should change the name of the file but keep the spf extension.

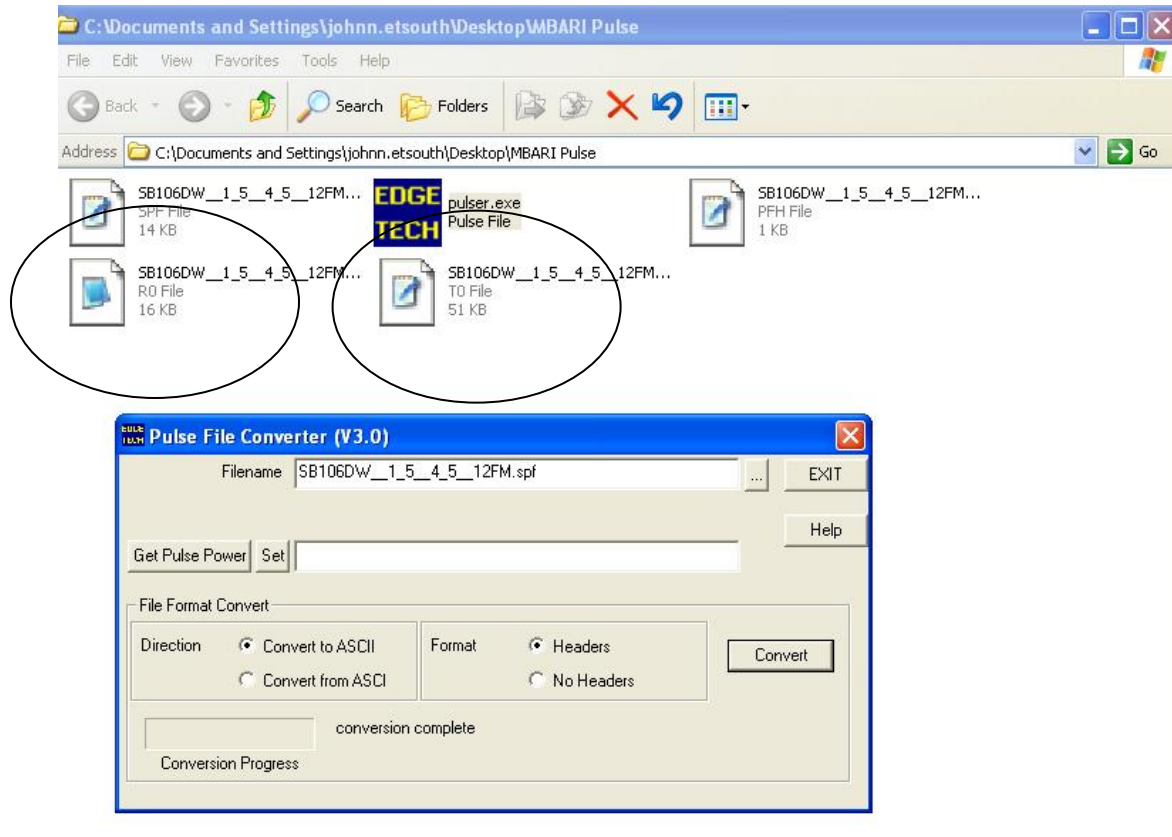
Using the newly named .spf file open the Sub Bottom pulse folder and start the pulser.exe program located in the sub bottom pulse folder

Click the browse (...) button to browse and open a pulse file.

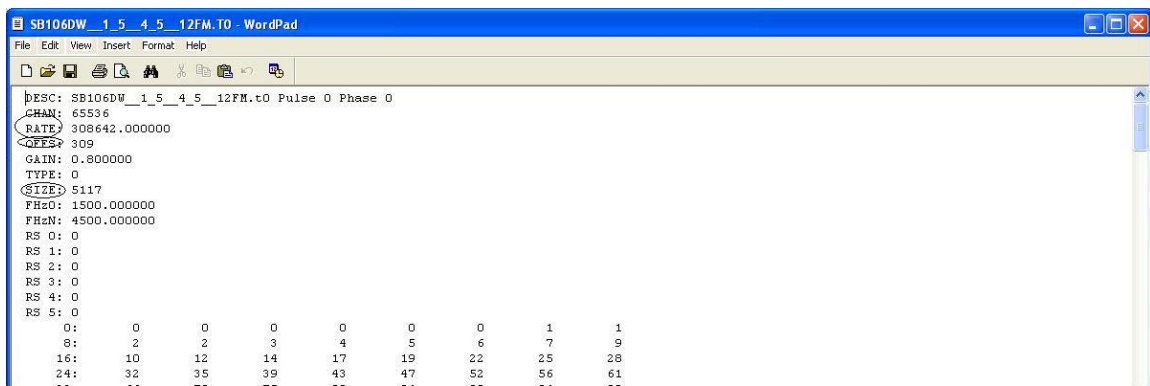


Verify the Convert to ASCII in Direction is checked and also Headers is selected in Format.

Click on Convert. When the conversation is completed look in the folder for a file that ends with .T0



In this case: SB106DW__1_5_4_5_12FM.t0 (you may need to select word pad to view the file) Next locate **RATE**, **OFFS** and **SIZE**



Perform the following calculations:

Pulselength in seconds = (offset + size) / rate

Write down the result of the calculation.

Next open the file that ends with R0 and locate the **RATE** field from this file.



Perform the following calculation

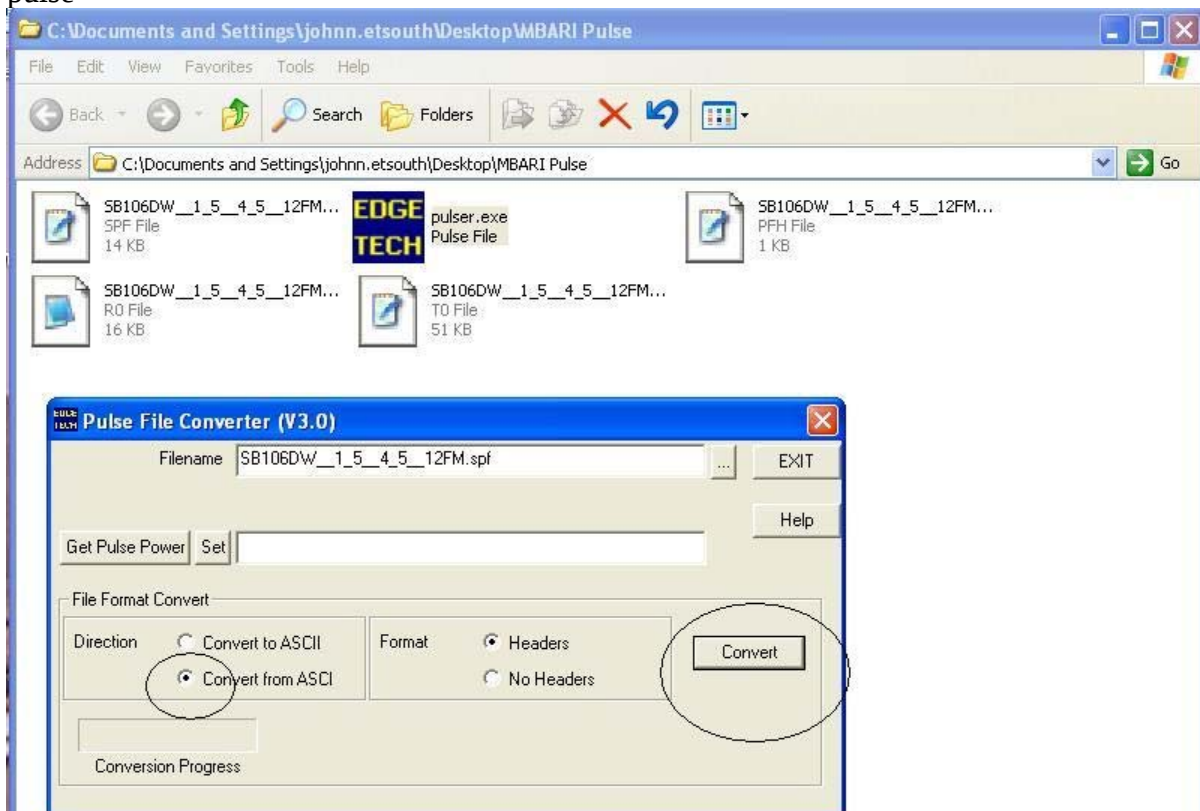
$$\text{PFAS} = (\text{Pulse length in seconds} + \text{Reverb margin .001ms}) * \text{Rate}$$

Insert this value in the **PFAS**

Save the R0 file.

```
SB106DW_1_5_4_5_12FM.R0 - Notepad
File Edit Format View Help
DESC: Comment
CHAN: 65536
RATE: 43402.777344
PFDF: 1
PFAS: 0
FFSZ: 4096
FFDF: 1
IFSZ: 4096
SAMP: 3190
FCOE: 94
SIZE: 758
FHZ0: 996.059814
FHZN: 5001.492188
RS 0: 0
RS 1: 0
RS 2: 0
RS 3: 0
RS 4: 0
RS 5: 0
0: 0.0000000e+000 0.0000000e+000 0.0000000e+000 0.0000000e+000
4: -1.0000000e-006 1.0000000e-006 -3.0000001e-006 4.9999999e-006
8: -2.0000000e-006 1.1000000e-005 1.0000000e-006 1.6000000e-005
12: 4.9999999e-006 1.9999999e-005 4.9999999e-006 2.4000001e-005
16: 3.0000001e-006 3.6000001e-005 9.0000003e-006 5.8000001e-005
```

Use pulser.exe to re-pack the pulse



After the conversation is completed test the pulse.