Excel Workbook for fiddling Hulls Data files Created by the Carlson Chine Hull Designer

This Excel Workbook is designed to help you work with the files created by the Carlson Chine Hull Designer
This is "EdsHullsFiddle.xls" Version 1.2 - Copyright Edward H Bachmann, 2007.   mailto:edbz@hotmail.com

Go To The
Eds Hulls Fiddle
Menu

This application will create two files:have the names:
   Fiddled.Hul - a file that can be read by the Carlson Chine Hull Designer
   Fiddled.Dxf - a file that can be read by most CAD applications with
       simple drawings of the parts that make up the boat design.

When you enable the macros in this workbook,
  Set the "Hulls Folder Path" cell on the "Main Menu" sheet to tell the application where to find the files

About Worksheet Protection in this application:
     The location of cells and labels is critical to the way the macros work
     Therefore most of the cells are protected. However, if you really want to turn this protection off, you can do so because
     there are no passwords set to hide things. But, if you move things around, the macros probably will not work properly.
     One exception is the data in the "Export Work" sheet which can be changed but not moved out of the relevant box.
     The other exception is the "Patterns" sheet which is not protected at all.
      It is possible to gather the frames from several imported Hand[plot.Txt Patterns) files and stick them all together so you
       can create a more complete DXF CAD file. The DXF export will handle up to 20 frames.

Overview and License

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Though you are welcome to take this application, modify it and redistribue it as explained the the GNU GPL
I would appreciate it if you would let me know about any enhancements s that I can icorporate the into future versions.

This Excel Workbook can be used to read a file created by the Carlson Chine Hull Designer and will
  put it into this workbook with the data labeled so you can understand what is where.

You can then use sorts or whatever works for you to look at and modify as you wish.

Then, if you want, you can export that information to a file that can be read without
  any problems by the Carlson Chine Hull Designer.

Eds Hulls Fiddle will also creat DXF files that can be imported by any CAD program. At this time, these files do not use actually curved
  lines but connects the lines between the bulkhead and frame corners. So it is a good thing to add the maximum number of frames that
  the Chine Hull Designer will handle. The export will hild andle up to 20 frames so you could do several Hulls-Designer Saves
  to generate more frames and then add the additional frames to the "DXF Export" area.

How to do the DXF Export:
  1) Import a Handplot.Txt file and it's associated Hulls Data file.
  2) Go to the "Patterns" sheet and do a "Select-All" and a "Copy" on that sheet.
  3) Go to the "DXF Export" sheet and Paste the whole thing there.
  4) Fiddle with things if you want or need to. (note: the Chine Hulls Designer will seemingly randomly add a duplicate point onto
    it's Chines patterns that will cause the crossways lines to get off. Just edit those out if you don't like the way the CAD
    drawings look when you see them there.
  5) Go to the menu and click on the DXF Export button.
  6) Read the Fiddle.Dxf file into your CAD program. It ought to look pretty good. It you want to Fiddle go back to #4.

The Work Area always has 10 chines but will be otherwise the same.
  Changing to 10 chines makes it easier to understand what is there and gives a consistent view.
  When you create a new file, the number of Chines will be whatever you leave set in "Export Work"
  If you want to take the default added Chines. They get set up with an "X" value of zero,
    and the same "Z" value as the "Bulkhead"
    and the "Y" values will "Walk Up" to the next inch of height for each added "Chine".

The Patterns are also read in and put into their own area and have some rough XY-graphs next to each object.

The primary data is in inches but the metric equivalents are always shown.

Worksheet Overview

Name of Sheet	Function	Protected?
Intro	Documentation & Instructions	Yes
Main Menu	The Menus and Setup Areas	Yes except for the cells for the Path & File to be read.
Hulls Data	Where your data gets translated	Yes
Export Work	Where you can finally edit your data	Critical areas are protected
Patterns	Where the Pattern data gets translated.	No
DXF Export	A copy of the data from "Patterns" that is used for the DXF / CAD file export	No

Do not change the names of any of these worksheets. The Macros will not work if you change the names.
    If you want to save the data for some reason, make a new Worksheet and copy the data there.

Eds Hulls Fiddle v1.2 - Other info

If you are curious:

Location of Data in a Hulls File

Note: all data is in inches with up to two decimal places)

	1	Number of Chines
	2	Start of Data Table
		Table is arranged with 3 lines for X, Y and Z values
		Those 3 lines are in groups of 5 for the 5 "Bulkhead" positions
		It repeats for the number of Chines
		and is followed by a "-1" (minus one)
X		Length of Data Table (3 * 5 * NumberOfChines)
		(3 * 5 * NumberOfChines)
		X = 1 +(3 * 5 * NumberOfChines)
X+1		This is where the ignored area starts
X+2		
Y		Length of the ignored area (39 times the number of chines.)
		Y = ('39 * Number of Chines)
Z		Transom Location
		(note other bulkhead positions come from the Data Offsets table)
Z+1		Frame 1 The Frames in Inches
Z+2		Frame 2 "
Z+3		Frame 3 "
Z+4		Frame 4 "
Z+5		Frame 5 "
Z+6		Frame 6 "
Z+7		Frame 7 "
Z+8		Frame 8 "
Z+9		Mast Length
Z+10		Boom Height
Z+11		Step Position
Z+12		Luff Length
Z+13		Head Length
Z+14		Head Angle
Z+15		Foot Length
Z+16		0 (Zero)
Z+17		0 (Zero)
Z+18		Designer's Name
Z+19		Designer
Z+20		Other Information
Z+21		Email/Url
Z+22		Date
Z+23		Ballast in pounds
Z+24		Location in Inches from Bow
Z+25		Height
Z+26		0 (Zero) The file ends with a Zero

Table for locations of Hulls.Dat file data lines

Number of Chines	Location of No. Chines	Data Table Start	Data Table End	plus 1	Ignore Start	Ignored Area	Length of Ignore Transom	Location of Transom	End of File
1	1	2	15	16	17	39	55		81
2	1	2	31	32	33	78	110		136
3	1	2	46	47	48	117	164		190
4	1	2	61	62	63	156	218		244
5	1	2	76	77	78	195	272		298
6	1	2	91	92	93	234	326		352
7	1	2	106	107	108	273	380		406
8	1	2	121	122	123	312	434		460
9	1	2	136	137	138	351	488		514
10	1	2	151	152	153	390	542		568

The Patterns File is fairly easy to understand -
   However, my programming logic may not be.
The Patterns File created by the Chine Hull Designer contains both
   inch and metric measures.
I use the inchs measures within the application.

Handplot.Txt files contain the patterns and look like this:

Line	Data					
1	Hand plotting file for c:\data\hulls\sbellen.hul 20:03:34 11-20-2007					
2	X in.	Y in.	X in-eights	Y in-eights	X mm	Y mm
3	stem.uc					
4	2.00	0.00	2-0/8	0-0/8	51	0
5	2.00	1.22	2-0/8	1-2/8	51	31
6	2.00	11.01	2-0/8	11-0/8	51	280
7	2.00	41.18	2-0/8	41-1/8	51	1046
8	0.01	56.20	0-0/8	56-2/8	0	1427
9	0.01	58.70	0-0/8	58-6/8	0	1491
10	0.01	78.70	0-0/8	78-6/8	0	1999
11	0.01	80.70	0-0/8	80-6/8	0	2050
12	0.01	85.20	0-0/8	85-2/8	0	2164
13	-0.01	85.20	-0-0/8	85-2/8	0	2164
14	-0.01	80.70	-0-0/8	80-6/8	0	2050
15	-0.01	78.70	-0-0/8	78-6/8	0	1999
16	-0.01	58.70	-0-0/8	58-6/8	0	1491
17	-0.01	56.20	-0-0/8	56-2/8	0	1427
18	-2.00	41.18	-2-0/8	41-1/8	-51	1046
19	-2.00	11.01	-2-0/8	11-0/8	-51	280
	-2.00	1.22	-2-0/8	1-2/8	-51	31
21	-2.00	0.00	-2-0/8	0-0/8	-51	0
22	2.00	0.00	2-0/8	0-0/8	51	0
23	transom.uc					
24	2.00	0.00	2-0/8	0-0/8	51	0
25	2.00	18.97	2-0/8	18-8/8	51	482
26	33.75	29.26	33-6/8	29-2/8	857	743
27	43.30	41.14	43-2/8	41-1/8	1100	1045
28	27.00	41.95	27-0/8	41-8/8	686	1066
29	27.00	44.45	27-0/8	44-4/8	686	1129
xxxxx	----------- more lines like this ------------					
31	0.00	0.00	0-0/8	0-0/8	0	0
32	chine6.uc					
33	1.19	19.96	1-2/8	19-8/8	30	507
34	20.28	18.84	20-2/8	18-7/8	515	479
35	39.30	17.74	39-2/8	17-6/8	998	451
36	39.30	17.74	39-2/8	17-6/8	998	451
37	57.89	16.69	57-7/8	16-6/8	1470	424
38	75.90	15.72	75-7/8	15-6/8	1928	399
39	93.54	14.90	93-4/8	14-7/8	2376	378
40	110.40	14.31	110-3/8	14-2/8	2804	363
41	127.78	13.98	127-6/8	13-8/8	3246	355
42	144.93	13.91	144-7/8	13-7/8	3681	353
43	161.73	14.07	161-6/8	14-1/8	4108	357
44	198.11	15.01	198-1/8	15-0/8	5032	381
45	235.12	16.75	235-1/8	16-6/8	5972	425
46	272.27	18.98	272-2/8	18-8/8	6916	482
47	281.00	4.87	281-0/8	4-7/8	7137	124
48	240.97	4.37	240-8/8	4-3/8	6121	111
49	201.08	3.98	201-1/8	3-8/8	5107	101
50	161.80	3.55	161-6/8	3-4/8	4110	90
51	145.00	3.26	145-0/8	3-2/8	3683	83
52	127.86	2.96	127-7/8	2-8/8	3248	75
53	110.48	2.68	110-4/8	2-5/8	2806	68
54	93.67	2.51	93-5/8	2-4/8	2379	64
55	76.03	2.33	76-0/8	2-3/8	1931	59
56	57.93	2.05	57-7/8	2-0/8	1471	52
57	39.06	1.55	39-0/8	1-4/8	992	39
58	19.60	0.83	19-5/8	0-7/8	498	21
59	0.00	0.00	0-0/8	0-0/8	0	0
60	chine7.uc					
61	1.86	0.73	1-7/8	0-6/8	47	19
xxxxx	----------- more lines like this ------------					