

Wood measurements for Seattle Luthier's Group

Using techniques from the Gore\Gilet book Contemporary
Acoustic Guitar

Contempo

Design and

Trevor Gore
and
Gerard Gilet

Volume 2; Build

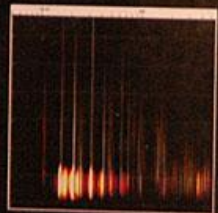
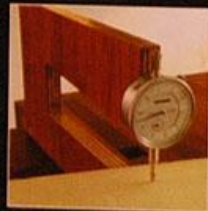
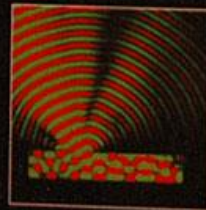


Contemporary Acoustic Guitar

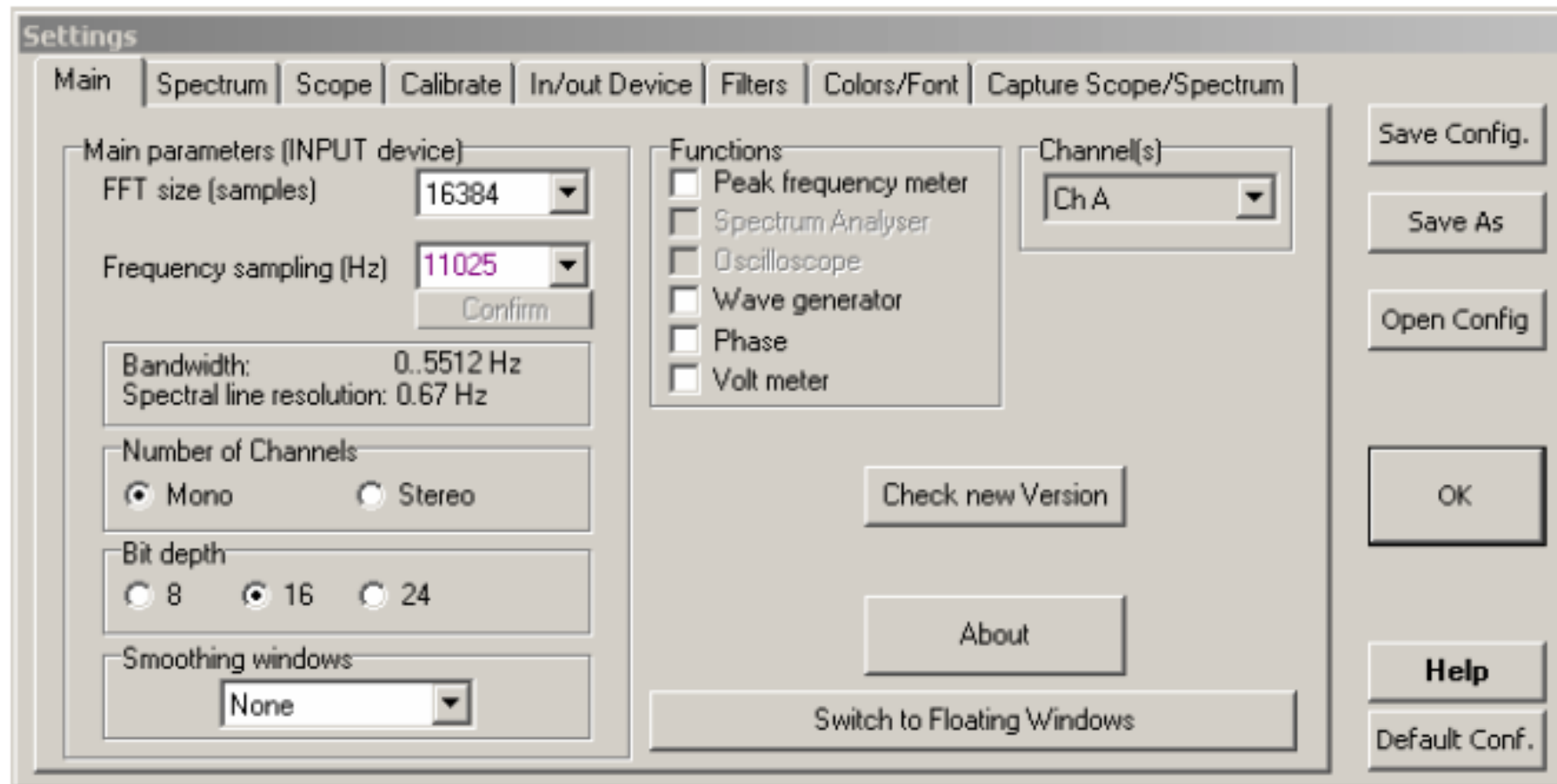
Design and Build

Trevor Gore
with
Gerard Gilet

Volume 1; Design



Setting up Visual Analyzer 1



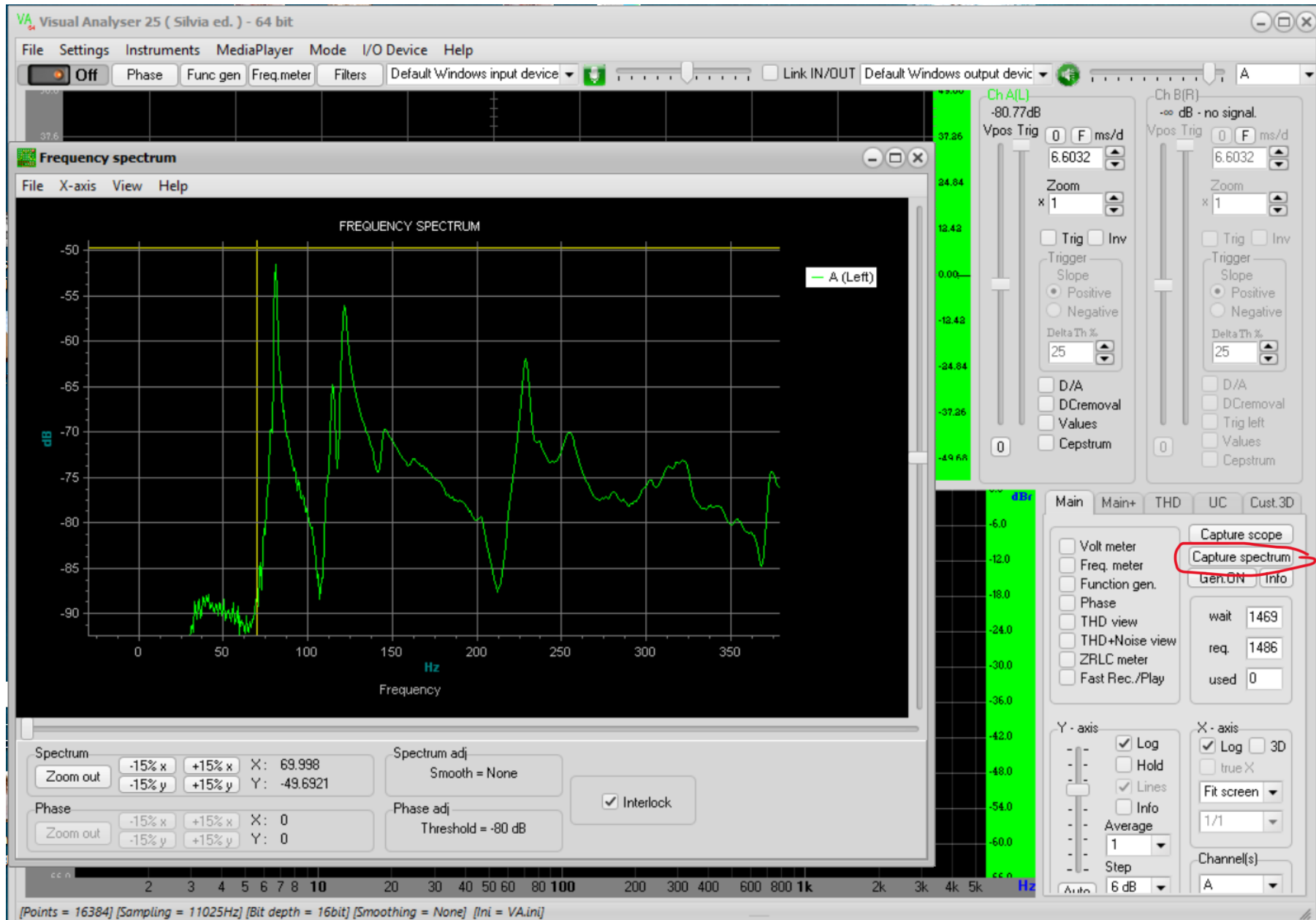
Setting up Visual Analyzer 2

The screenshot shows the 'Settings' dialog box for Visual Analyzer 2, specifically the 'Capture Scope/Spectrum' tab. The dialog has a tabbed interface with the following tabs: Main, Spectrum, Scope, Calibrate, In/out Device, Filters, Colors/Font, and Capture Scope/Spectrum. The 'Capture Scope/Spectrum' tab is active and contains the following settings:

- Capture Scope:**
 - Capture scope samples for: 10 second(s) (0 = one input buffer)
 - Start capture scope button
- Capture Spectrum:**
 - Spectrum average for EDIT window: 10 buffer(s)
 - Start capture Spectrum button
- Capture scope:**
 - with no threshold (selected)
 - after crossing trigger threshold
 - only samples > trigger threshold
- Samples before start aqiring scope:**
 - 0
 - Buffer(s) (mS=0.00)
- Threshold settings:**
 - Samples must cross threshold at least for: 1
 - Apply button
 - consecutive samples (0 mS)

On the right side of the dialog, there are several buttons: Save Config., Save As, Open Config, OK, Help, and Default Conf.

Visual Analyzer Spectrum View

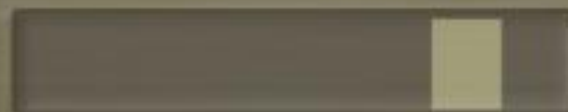




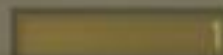
NOTE SEL **TAP TUNE**

TAP TUNING ENABLE ☒

THRESHOLD ADJUST



AVERAGE TAPS



NOTE /
OCTAVE



CENTS -
HERTZ -
MIDI -
OFF -



GLOBAL CENTS OFFSET



TARGET INPUT



GLOBAL CENTS OFFSET 0.0

CONCERT A 440.0

TEMPERAMENT EQU

TRANSPOSE/DROP/CAPO +0 (KEY:C)

CLIP
-20
-40
-60
dB

INPUT



CHROMATIC
TUNE

INSTRUMENT
TUNE

SETUP

POWER



StroboSoft™ by *Deluxe* **peter**son



dynamic and deflection thickness calculation.xlsx

[illegible]



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Longwise Deflection (with grain)

	Inputs	
	information	
	Calculated values	

Vibrational Stiffness Values	Typical Reference Values
Steel String top	75
Steel String Back	55
classical top	60
classical back	50

Load	Span	Width	Thickness	Deflection
0.504	0.15	0.049	0.0035	0.0026

Pacals	Gpa						
6.88E+09	6.881838						
7.64E+08	0.76373						
1E+09	1	set to 1 as it is not used in deflection thickness					
2.644535							

Vibrational Stiffness

EL	6.88E+09	6.881838					
EC	7.64E+08	0.76373					
ELC	1E+09	1	set to 1 as it is not used in deflection thickness				
50							
Desired thickness	2.644535						

Guitar Length	0.485
Guitar width	0.365

Trevor Gore defined Box resonances for guitars with active backs

Guitar Type	Typ. Dimensions (mm)	Main Low Frequency Resonances (Hz)		
		Fully Coupled Air (as seen in the top response), $T(1,1)_1$	Fully Coupled Top $T(1,1)_2$	Fully Coupled Back (as seen in top response) $T(1,1)_3$
SS = Steel String CL= Classical	Length x Width			
SS Large	520 x 410	90	160	202
		90	170	214
		95	170	214
SS Medium	490 x 390	90	170	214
		95	180	226
		100	180	226
SS Small	490 x 360	95	180	226
		100	190	240
		100	190	240
CL	490 x 360	95	202	254
		90	170	~
		95	180	~
Flamenco	480 x 360			

Additional References and online tools



<https://www.celestialinstruments.com/blogs/calculators/thickness-calculator>

<https://www.celestialinstruments.com/blogs/calculators/plate-tuning-audio-analyzer-with-frequency-generator>

Greg Holmberg post on Acoustic Guitar Construction Forum (mine) with links to a nearly complete spreadsheet of the final equations in the Contemporary Acoustic Guitar Gore/Gilet:

<https://acousticguitarconstructionforum.com/viewtopic.php?p=30966#p30966>