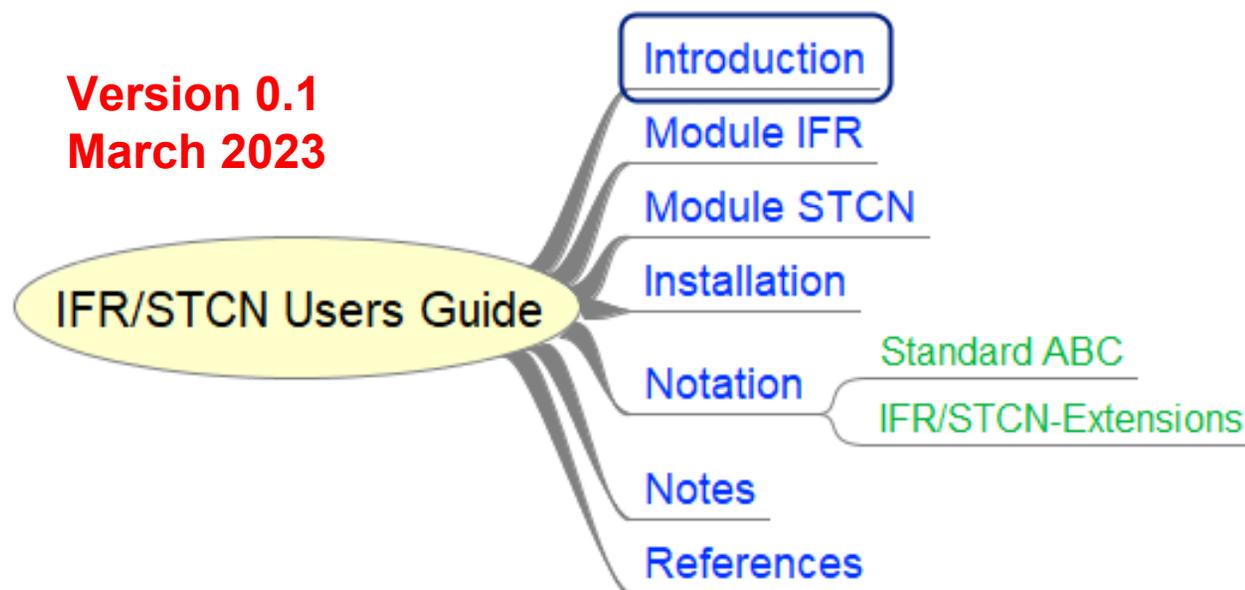


Version 0.1
March 2023



Contact:

1. slingaya via the topic *IFR and ABC Music Notation* in the Improve For Real Community
2. via Email
STCA.Lingaya@t-online.de

Donations:

See link on last page...

Introduction

Using the ABC Music Notation [1] [2] Jef Moine has implemented an extensive collection of modules in JavaScript[3], including the "strtab"-module to display tablatures for string instruments and the "mdnn"-module, which implements Phil Nice's MDNN (Modernised Diatonic Numerical Notation) [4], definitely a key-agnostic approach of defining a tune.

Using these modules as "templates", over the past fifteen months I have programmed, in the same vein, the following extensions to the abc2svg-family.

The **IFR**-module adds to a tune specified in ABC a pitch-respecting "contour" of the melody and a "tablature" of the harmony in David Reed's IFR-notation[5].

The **STCN**-module is inline with the advocates of a Macro (David's Tonal Map) and Micro (the Chord-specific context) analysis of the harmony for a tune.

I find this very supportive, a newbie (learning playing Chord Melody...). The display contains the specified harmonies (albeit in an extended Chord Notation), the Standard Musical Notation, the current Harmonies as Degrees of the current Key, the Melody notes in a multi-octave setting, the same Melody Notes as "generic" notes in the context of the current Chord/Harmony, and finally the Quality (Triad/Tetrad) of the current Chord.

Module STCN

rendering see next page

(Standard Tonal Chordal Notation)

This module takes a ABC-specification and displays the following:

The first area shows the melody in standard music notation, with the lead-sheet chords (eventually with extensions and alterations) right above it.

The original rhythmic notation is preserved (duration, ties, slurs, triplets,...). The current key is also shown.

(Caveat: I have not thoroughly tested modulating to another key yet ...)

The next area shows the real analysis stuff.

This is also inline with the advocates of micro and macro music analysis when studying harmonization.

D-Line:

The lead-sheet chords shown as degrees in the current key, respecting the chord quality and using a slash to denote non-root bass.

T-Line:

This line shows the melody notes in the TONAL map of the given Major key, and marks them according to their appropriate octaves:

unmarked for the basic register, a [']-superscript for the next higher octave, a _,-subscript for the lower octave, and so on.

Tied-notes are shown in a slightly smaller font with a sort of underscore.

Rests are displayed as small square irrespective of duration, but in sync with the rest-marks in the standard notation.

C-Line:

This line shows the melody notes in relation to the root of the current chord.

I call this the Chordal system - for a few beats I am now living in the world defined by this chord.

Chord-Notes are displayed as circled digits, other notes in standard font.

Same remarks apply to ties and rests as for in the T-line.

Q-Line:

As a beginner I have found it most supportive for playing Chord melody to know at a glance the quality of the world/chord I am currently living/playing in. Thus this line is mostly restricted to basic triads or tetrads.

STCN

File Preferences Language Help

ABC files: (noname)

```
X:1
T:Clair De Lune (Trad.)
M:4/4
L:1/4
%%pagewidth 21cm
%%leftmargin 1.4cm
%%rightmargin 1.0cm
%%measurenb 1
I:linebreak $
%%staffsep 100|
%%gchordfont monospace 20.0
%%annotationfont sans-serif * 7 box
%%stcn
V:1 treble
V:2 tab nostems
K:F
V:1,2
"F,F" F F F "C"G | "F"A2 "Gm"G2 | "Dm" F A "C7" G G | "F" F4 |$
"F" F F F "C"G | "F"A2 "Gm"G2 | "Dm" F A "C7" G G | "F" F4 |$
"C" G G G G | "Dm" D2 D2 | "Gm" G F E D | "C7" C3 z|$
"F" F F F "C"G | "F"A2 "Gm"G2 | "Dm" F A "C7" G G | "F" F3 z|
```

Clair De Lune (Trad.)

The image shows a musical score for "Clair De Lune (Trad.)" in F major, 4/4 time. The score is presented in three systems, each with a treble clef staff and a guitar tablature staff. Chords are indicated above the staff, and fingerings are shown in the tablature.

System 1 (Measures 1-4):

- Measure 1: Chord F, Fingering 1M
- Measure 2: Chord C, Fingering 5M
- Measure 3: Chord F, Gm, Fingering 1M, 2m
- Measure 4: Chord Dm, C7, F, Fingering 6m, 5D7, 1M

System 2 (Measures 5-8):

- Measure 5: Chord F, Fingering 1
- Measure 6: Chord C, Fingering 1
- Measure 7: Chord F, Gm, Fingering 1, 2
- Measure 8: Chord Dm, C7, F, Fingering 3, 2, 1, 3, 2, 2, 1

System 3 (Measures 9-16):

- Measure 9: Chord C, Fingering 5M
- Measure 10: Chord Dm, Fingering 6m
- Measure 11: Chord Gm, Fingering 2m
- Measure 12: Chord C7, Fingering 5D7
- Measure 13: Chord F, Fingering 1M
- Measure 14: Chord C, Fingering 5M
- Measure 15: Chord F, Gm, Fingering 1M, 2m
- Measure 16: Chord Dm, C7, F, Fingering 6m, 5D7, 1M

Note A more advanced example can be found in the sub-folder "ABC_Ballads"

Installation

Download	<p>Link</p> <p>https://www.dropbox.com/scl/fo/9pxlor0y79i8w66yj3t4r/h?dl=0&rlkey=vcar7i117hp7b4nz007ngpeen</p> <p>► This leads to the shared area of my Dropbox.</p> <p>Use the '...' button to download the whole package to your computer.</p> <p>► This creates a "ABC IFR STCN.zip"-file in this directory.</p> <p>Unzip this compressed file to your desired location.</p> <p>► eg D:\ABC_IFR_STCN\ ▶▶▶</p> <p>This directory has several sub-folders for Ballads, Classical, Pop and Traditional tunes. This is my personal layout - you can adjust as you prefer ...</p>
Operation	<p>In the Firefox-Browser place/create a bookmark to the ABC_IFR_STCN location.</p> <p>file:///D:/ABC_IFR_STCN/abc2svgSL.xhtml</p> <p>Double-click on that bookmark to start the App, which will run offline and locally.</p> <p>Load an ABC-file EITHER by "Drag-and-Drop" the file in the left window OR by using Moine's "File/Load"-menu..</p> <p>Clicking once in the script area will then render the tune - either IFR-wise or STCN-wise, according to the spec.</p> <p>Editing the current script can be done interactively thanks to Moine's built-in text-editor...</p> <p>As a bonus, you can PLAY the tune (or parts of it) by using Jef's built-in music player (right-click context menu).</p> <p>The Help menu includes a link to a compact description to the Chord Notation with extension used for the IFR And STCN modules.</p>

- 📁 [ABC_Ballads]
- 📁 [ABC_Classic]
- 📁 [ABC_Pop]
- 📁 [ABC_Trad]
- 📁 [abc2svg_files]
- 📄 IFR_STCN_UsersGuide_V.0.1
- 📄 ABC_IFR_STCN
- 🔥 abc2svgSL
- 📁 desktop
- 📁 ABC_STCN
- 📄 README_ori_Gonzato
- 📄 README_SL
- 🔥 abc2svg_ori

- File
- Load file
- Save file

- Play
- Tune
- Selection
- Loop
- Continue

- Help
- Help
- [abc2svg features](#)
- [abc2svg parameters](#)
- [ABC extensions for IFR and STCN](#)
- About

Download link to Dropbox:

Notation Basic

STCN Standard ABC-Notation	(s. Ref. 1)
X:1	
T:Clair De Lune (Trad.)	
M:4/4	
L:1/4	
%%pagewidth 21cm	
%%leftmargin 1.4cm	
%%rightmargin 1.0cm	
%%measurenb 1	
I:linebreak \$	
%%staffsep 100	
%%gchordfont monospace 20.0	
%%annotationfont sans-serif * 7 box	
%%stcn	STCN Module (S.Lingaya)
V:1 treble	Standard Notation (Treble Staff)
V:2 tab	Tonal & Chordal Notation

Translation Table		
STCN	Spelling	IFR
1	1 3 5	1
1M	1 3 5	1
1Ms2	1 2 5	1
1Ms4	1 4 5	1
1m	1 b3 5	1-
1a	1 3 #5	1
1d	1 b3 b5	1-
1M6	1 3 5 6	1
1m6	1 b3 5 6	1-
1M7	1 3 5 7	1
1m7	1 b3 5 b7	1-
1D7	1 3 5 b7	1D7
1h7	1 b3 b5 b7	1-b5
1d7	1 b3 b5 6	1-b5
1mM7	1 b3 5 7	1-7

IFR Standard ABC-Notation	(s. Ref. 1)
X:1	
T:Clair De Lune (Trad.)	
M:4/4	
L:1/4	
%%pagewidth 21cm	
%%leftmargin 1.4cm	
%%rightmargin 1.0cm	
%%measurenb 1	
%%sysstaffsep 180	
I:linebreak \$	
%%staffsep 65	
%%gchordfont monospace 10.0	
%%annotationfont sans-serif * 7 box	
%%ifr	IFR Module (S.Lingaya)
V:1 treble	Standard Notation (Treble Staff)
V:2 tab REED	Harmony-Line in Reed-IFR Chord Notation with Rhythm-Line
V:2 tab REED nostems	Reed-IFR Notation without Rhythm-Line
V:2 tab	Harmony in extended Chord-Notation with Rhythm-Line
V:2 tab nostems	Harmony in extended Chord-Notation without Rhythm-Line

Alternatives
for Tablature

Notation Extended

ABC-Notation with Extensions for STCN / IFR

Basic	
K:F	Key is F Major
V:1,2	Rendering of both Voice 1 (Standard) and Voice 2 (TCN).
"F,F" F F F "C"G ...	First Chord must have a comma-separated entry with 2 fields: -First field is the Key (Here F a repeat of the ABC V-Field) -Second field is the Chord for the current Harmony, here F (or N for no Chord)
	Within this bar, a Chord C is then placed before the G .
... "C7/G" G G ...	Spec ⁿ of a "C7"-Chord with G in the Bass (2. Inversion)
... "Bb,D" G G ...	Within the script, Modulation is indicated by a comma-separated entry. viz. New Key is Bb , and current Harmony is D .
... "C,E:#5"z2 e c ...	Key C . Harmony Chord E with alteration #5.

Chord Quality (here C)		
"C" or "CM" } Triads	C Major	1-3-5
"Cm" }	C minor	1-b3-5
"Cd" }	C dim	1-b3-b5
"Ca" }	C aug	1-3-#5
"CM7" }	C Major 7	1-3-5-7
"Cm7" }	C minor 7	1-b3-5-b7
"C7" }	C Dom 7	1-3-5-b7
"Ch7" }	C half-dim 7	1-b3-b5-b7
"CmM7" }	C min Maj 7	1-b3-5-7
"Cd7" }	C full-dim 7	1-b3-b5-6

Chord Extensions etc.	
"CD7/G"	Chord C Dom 7 with G in Bass CD7/G
"E:#5/G"	Chord E Maj with #5 and G in Bass E/G #5
"D:sus4"	Chord D sus4 D sus4
"G7:b9b13"	Chord G Dom 7 with Ext. b9,b13 G7 b9b13

Notes

Acknowledgements

I am a 75+ retired software scientist/engineer who has started guitar playing about 7 years back. Thru the internet I was able to climb on the shoulders of several giants in my pursuit of attaining a minimal fluency in playing the guitar, Chord Melody style.

The biggest influences have definitely been **David Reed's** IFR approach to music, and **Jef Moine's** brilliant package to support the rendering of ABC-notated music. The support of Guido Gonzalo in packaging Jef's set of modules has enabled me to jumpstart a distribution of my efforts.

I definitely would like to acknowledge, among others, the teachings of the following Internet gurus: Tim Lerch, Jared Borowski, Simon Candy, Jens Larsen, Matt Warnock, David Wallimann, ... My thanks also go to my face-to-fac teacher here in Berlin - Diermar Schwanitz.

As an aside, I am also including an image of what I call a "**Generic Fretboard**" - this incorporates Jon Finn's Warp Border between the G and B string.

When playing a tune, I look at the Tonal Map (which is key-agnostic, ie letter.name independent), I can then play the melody starting "anywhere" on the 1st or 2nd string.

To find a basic harmonization, I then play the triads round about the current melody note (this is in tune (<<- joke) with Tim Lerch's philosophy of Melodic Triads. I can also use any color notes thru extensions and/or alterations of the current Chord quality.

Limitations

- I have tried to script more complex tunes (eg with modulation), but I have not tested them thoroughly yet. I might include them in a later edition of this User's Guide.
- More complex rhythms (n-tuplets) are not handled correctly.
- In the Rhythm-Line no distinction can be made between quarter-notes and half-notes.

"Generic" Fretboard

	\$6	\$5	\$4	\$3	\$2	\$1
b3	b3	b6	b2	b5	b7	b3
3	3	6	2	5	7	3
4	4	b7	b3	b6	1	4
b5	b5	7	3	6	b2	b5
5	5	1	4	b7	2	5
b6	b6	b2	b5	7	b3	b6
6	6	2	5	1	3	6
b7	b7	b3	b6	b2	4	b7
7	7	3	6	2	b5	7
1	1	4	b7	b3	5	1
b2	b2	b5	7	3	b6	b2
2	2	5	1	4	6	2
b3	b3	b6	b2	b5	b7	b3
3	3	6	2	5	7	3
4	4	b7	b3	b6	1	4
b5	b5	7	3	6	b2	b5
5	5	1	4	b7	2	5
b6	b6	b2	b5	7	b3	b6
6	6	2	5	1	3	6

Programmers's Corner

Notation

Building on the ideas of Chris Harte on "Representing Chords In Plain Text" [9] I have tried to express my extensions on the Chord Notation as shown in this Table.

Syntax for Chords in Backus-Naur-Form	
ChordSpec ::=	<ChordRoot> [<ChordAcc>] [<Quality>] [":<Options>"] ["/<Bass><BassAcc>"]
<Options>::	<NatNumber> <AccNumber> <susNum>
<ChordAcc>::	<ChordRoot><Acc>
<BassAcc>::	<Bass><Acc>
<AccNumber>::	<Acc><NatNumber>
<ChordRoot>::	A B C D E F G
<Bass>::	A B C D E F G
<Acc>::	b #
<NatNumber>::	9 11 13
<Quality>::	Space M m d a M/ m7 mM7 d7
<susNum>::	sus2 sus4

Programming

For the development of the IFR- and STC-Modules in Javascript, I have used a very simple, but effective setup.

- The code was written by means of a professional code Editor - Ultra Edit.
- The code was then loaded, mostly Copy and Paste, in left windows of the abs2svg_SL-app running under Firefox.
- Using the very extensive debugging facties offered in place by Firefox "Tools / Browser Tools / Web Developer Tools" (breakpoints, watches, console logs, call stack and other features), a very quick and fruitful interactive debugging and coding cycle was possible.

References

- [1] The abc music standard 2.1 (Dec 2011)
<http://abcnotation.com/wiki/abc:standard:v2.1>

- [2] abc notation homepage
<https://abcnotation.com/>

- [3] Jean-Francois Moine: abc2svg Documentation
<https://chiselapp.com/user/moinejf/repository/abc2svg/doc/trunk/README.md>

- [4] Phil Nice: The Case for Numerical Music Notation
https://medium.com/@info_70544/the-case-for-numerical-music-notation-part-1-introduction-and-history-5f1543ca8a95

- [5] David Reed: *Improvise For Real*. 2011.

- [6] Guido Gonzato Homepage (Portable abc2svg)
<https://abcplus.sourceforge.net/#abc2svg>

- [7] Jon Finn: *Modern Rock Guitar Improvisation* 1999 Mel Bay Pub.
Chap.2 The Warp Refraction Principle

- [8] Tim Lerch: *On Location: Melodic Triads*.
Interactive Video Course on TrueFire.

- [9] Chris Harte: *Towards Automatic Extraction of Harmony Information from Music Signals*. 2010
Chap. 4

Donations:

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Thanks.