

# I Hear Numbers (Tall Kite)

Tuning: 7-limit adaptive just intonation

Tonic: C at 0¢ from A-440 12-ET

Notation is explained at [xenharmonic.wikispaces.com/Kite's+color+notation](http://xenharmonic.wikispaces.com/Kite's+color+notation)

The actual midi files used are available at [www.TallKite.com/music/IHearNumbers.html](http://www.TallKite.com/music/IHearNumbers.html)

These files let you see and hear each part individually, functioning as a substitute for a full music score

All instrumental sounds are from the Yamaha s90es, tuned with alt-tuner

Backing vocals by Hope Taylor

Mixed by Mark Frethem, aka "Doctor Digital"

Untuned midi file (205 bpm):

channel 1 & 2: keyboard (left & right hand)

channel 3: guitar

channel 4: bass guitar

channel 5: synth lead in 41-note scale, middle-C = note #53, CC #22 is for bending, not tuning

channel 6-7: congas (6 = high, 7 = low)

channel 8-12: drums (chan 8 = kick, ch9 = snares, ch10 = hihat, ch11 = cymbals, ch12 = bell and toms)

channel 13-15: backing vocals (demo)

channel 16: CC messages for tuning switches, CCs 21-29 for tunings 1-9:

1: wC, zgD<sup>b</sup>, wD, zE<sup>b</sup>, yE, wF, zgG<sup>b</sup>, wG, zA<sup>b</sup>, yA, zB<sup>b</sup>, yB (solo)

2: wC, zD<sup>b</sup>, yD, zE<sup>b</sup>, yE, wF, zgG<sup>b</sup>, wG, zA<sup>b</sup>, yA, wB<sup>b</sup>, yB (solo)

3: wC, zgD<sup>b</sup>, wD, zE<sup>b</sup>, yE, zF, zgG<sup>b</sup>, wG, zgA<sup>b</sup>, wA, zB<sup>b</sup>, yB (intro, solo, verse, breakdown, coda)

4: wC, ryC<sup>#</sup>, wD, zE<sup>b</sup>, yE, zF, ryF<sup>#</sup>, wG, ryG<sup>#</sup>, yA, zB<sup>b</sup>, yB (chorus)

5: zzzgD<sup>b</sup>, zgD<sup>b</sup>, zzzgE<sup>b</sup>, zE<sup>b</sup>, zzzgF<sup>b</sup>, zF, zgG<sup>b</sup>, zzzgA<sup>b</sup>, zgA<sup>b</sup>, zzzgB<sup>b</sup>, zB<sup>b</sup>, zgC<sup>b</sup>  
(breakdown)

6: rryyB<sup>#</sup>, ryC<sup>#</sup>, rryyC<sup>x</sup>, rryD<sup>#</sup>, rE, rryE<sup>#</sup>, ryF<sup>#</sup>, rryyF<sup>x</sup>, rryG<sup>#</sup>, rA, rryA<sup>#</sup>, ryB (breakdown)

7: wC, ryC<sup>#</sup>, rD, gE<sup>b</sup>, rE, wF, ryF<sup>#</sup>, wG, ryG<sup>#</sup>, rA, gB<sup>b</sup>, rB (breakdown)

8: zC, zgD<sup>b</sup>, wD, zgE<sup>b</sup>, yE, zF, yF<sup>#</sup>, wG, zgA<sup>b</sup>, wA, zB<sup>b</sup>, yB (bridge, coda)

9: zC, yC<sup>#</sup>, zD, zgE<sup>b</sup>, wE, zgF, yF<sup>#</sup>, zG, yG<sup>#</sup>, wA, zgB<sup>b</sup>, wB (bridge)

Tuned midi file (205 bpm, assumes a 2-semitone pitch bend range):

channels 1-5: keyboard (channel 1 = left hand)

channels 6-8: guitar

channels 9-10: bass guitar

channel 11: synth lead in 12-note scale, CC #22 is for bending up/down 1 octave, not for tuning

channels 12-14: backing vocals (demo)

channel 15: congas

channel 16: drums

The synth uses a fixed 41-note scale:

wC rC zD<sup>b</sup> zgD<sup>b</sup> gD<sup>b</sup> aD yD wD rD

zE<sup>b</sup> wE<sup>b</sup> gE<sup>b</sup> jE<sup>b</sup> yE ryE rE

zF wF gF jF zgG<sup>b</sup> ryF<sup>#</sup> aG yG wG rG

zA<sup>b</sup> zgA<sup>b</sup> gA<sup>b</sup> eA<sup>b</sup> yA wA rA

zB<sup>b</sup> wB<sup>b</sup> gB<sup>b</sup> jB<sup>b</sup> yB ryB rB zC wC

Chords:

section	tuning	chords			
intro	3	Gh7	yEg7(zg5)	Gh7	yEg7(zg5)
	3	Gh7	yEg7(zg5)	Gh7	/
solo 1	1	Ch7	zE <sup>b</sup> s6	Fh7	/
	1	Ch7	zE <sup>b</sup> s6	Fh7	/
	2	wB <sup>b</sup> h7	/	zE <sup>b</sup> s6	/
	1 & 3	zA <sup>b</sup> r,g7	/	Gh7	/
verse 1	3	Ch7	zB <sup>b</sup> s6	Ch7	zB <sup>b</sup> s6
	"	Ch7	zB <sup>b</sup> s6	Ch7	zB <sup>b</sup> s6
	"	Ch7	zB <sup>b</sup> s6	Ch7	zB <sup>b</sup> s6
	"	Ch7	zB <sup>b</sup> s6	Ch7	/
chorus	4	yAg7	/	yBs6(zg5)	/
	"	/	/	yAg7	/
	"	/	/	yBs6(zg5)	/
	"	yAr,g7	yAs6(zg5)	Gh7	/
solo 2		like solo 1			
breakdown	3 & 5	Ch7	zB <sup>b</sup> s6	zgG <sup>b</sup> h7	zzgB <sup>b</sup> s6 = rryG <sup>#</sup> s6
	6, 7 & 3	rryD <sup>#</sup> h7	ryF <sup>#</sup> s6	rAh7	Gh7
verse 2	3	Ch7	zB <sup>b</sup> s6	Ch7	zB <sup>b</sup> s6
	3 & 8	Ch7	zB <sup>b</sup> s6	Ch7	wDh7
bridge	8	Gh7	Gs7	wDh7	/
	8 & 9	/	wDs7	Gh7	wAz7
	9	wEh7	wEs7	wAh7,zg9	wAy6
	9 & 8	/	wAs7	wDh7	Gh7
solo 3		like solo 2			
coda	3	Ch7	/	zB <sup>b</sup> g7	/
	"	zE <sup>b</sup> r,g7	/	Gh7	/

In the breakdown, bbgB<sup>b</sup> and rryG<sup>#</sup> differ by only  $z^4gg3 = 2401/2400 = 0.7\text{¢}$ . In other words, the breakdown pumps the 2401/2400 comma.

Lyrics:

Is this a stroke of genius or a total waste of time?  
Am I the coolest guy on earth or have I lost my mind?  
I'm obsessed with numbers, I can hear them in my head,  
I can see the colors and they're green and blue and red!  
I got to stop, I'm gonna stop real soon  
I promise honey, I'm gonna feed the cat and clean the room  
I promise that I'll get some sleep, I know I'm acting strange,  
But I can't stop thinking 'bout the numbers in my brain!  
I hear numbers, I hear numbers, I hear numbers, I hear numbers

Gonna fiddle with the midi, gonna twiddle it a little bit  
And pan it to the middle with a little bit of sizzle  
And compress the mids a little less and it'll be impressive  
'Cause the midi is the message and the message is a riddle  
I hear numbers (The midi is the message) I hear numbers (The message is a riddle)  
I hear numbers (The midi is the message) I hear numbers (The message is a riddle)  
I hear numbers (The midi is the message and the message is a riddle)

I hear numbers, I hear numbers, I hear numbers, I hear numbers

I hear numbers, I hear numbers, I hear numbers, I hear numbers  
All the time, all the time, all the time, all the time  
Obsessed with numbers, I can hear them all the time  
I can see the music, the colors are divine!  
Obsessed with numbers, I can hear them in my mind  
Seven six, seven five, and fourteen over nine  
Obsessed with numbers, now I hear them all the time