



Hey folks! Thanks for grabbing the album and tuning in. In my spare time I've slowly been putting this album together. This is for everybody who waited so patiently for my new sounds. Shout out to friends, colleagues and the xenharmonic alliance.

Horixens continues my own exploration of microtonal scales, grooves and atmospheric electronic sounds. Every track is microtonal, some of them are xen too.

You'll likely hear more albums from me in the future. But it will take time. Hope you enjoy Horixens.

- Sevish

Cover artwork by Martín Calderón

1. COME ON A JOURNEY

Uses a non-octave just intonation scale based on harmonics 16 to 24. That means this scale repeats every perfect fifth. If you take every other note, you have a scale based on 8:9:10:11:12. It's neat but also difficult to make real music with it. That's why you can sometimes hear a note with weird intonation here.

I did "cheat" with one of the instruments. It was one of the sub bass sounds - there are two copies of it, one is in the correct tuning and the other is 2 octaves lower. When I say cheat, I don't actually consider it cheating - my judgement is that you can borrow notes from outside of the scale to serve the end result.

```
! Harmonics 16-24.sc1
!  
Harmonics 16-24  
8  
!  
17/16  
9/8  
19/16  
5/4  
21/16  
11/8  
23/16  
3/2
```

2. BAIBAOSHUIJIAOJIAO

The thing about 12-note temperaments is that they map so perfectly on to a standard keyboard. Someone who has studied a little piano will find that familiar and intuitive. Patterns learned from 12edo can be played but the differences in colour create a different impression.

I'm pretty sure it was Gene Ward Smith who posted this tuning on Facebook a few years back.

```
!  
Marveldene WhiteKeySeptimalMinorRotation\_TE\_12.sc1  
!  
The Marveldene, a 2.3.5.7 classic. Septimal Aeolian minor oriented on white keys, A minor. TE Version.  
12  
!  
116.01264  
232.02527  
316.92766  
432.94029  
499.84142  
615.85405  
700.75644  
816.76907  
932.78170  
999.68282  
1133.69672  
1200.59784
```

3. IN THE ZOON

The bright synth melodies in the second half use mode 2 4 2 4 3 3 5 of 23edo (pure octaves). The other instruments throughout all use 23edo with stretched octaves (1214 cents). I think the stretching makes the chords sound smoother, although the intonation is still way out there.

```
! 23edo\_mode\_2\_4\_2\_4\_3\_3\_5.scl
```

```
!  
23edo mode 2 4 2 4 3 3 5  
7  
!  
104.34782608695652  
313.04347826086956  
417.39130434782606  
626.0869565217391  
782.6086956521739  
939.1304347826086  
1200.
```

```
! 23 equal divisions of 1214.scl
```

```
!  
23 equal divisions of 1214.  
23  
!  
52.782608695652165  
105.56521739130433  
158.3478260869565  
211.13043478260866  
263.9130434782608  
316.695652173913  
369.47826086956513  
422.2608695652173  
475.0434782608695  
527.8260869565216  
580.6086956521738  
633.391304347826  
686.1739130434781  
738.9565217391303  
791.7391304347825  
844.5217391304346  
897.3043478260868  
950.086956521739  
1002.8695652173911  
1055.6521739130433  
1108.4347826086955  
1161.2173913043475  
1214.0
```

4. UNREALITY

I was just having fun by building up a wall of reverb. It's a convolution reverb using exponentially decaying white noise as the impulse response. Sounds like a synthetic, perfect, featureless reverb. Not a trick I often use. I remember getting the idea from Mike Battaglia who suggested it on IRC.

First section uses the 7-limit pentatonic mode of this tuning. As the piece develops those couple 13-limit notes get thrown in the mix.

I set my DAW to 27/4 time signature and messed with it. Sections with the half-tempo drums are in 4/4

```
! Unreality\_just\_intonation.scl
```

```
!  
Unreality (just intonation)  
7  
!  
13/12  
7/6  
4/3  
3/2  
13/8  
7/4  
2/1
```

5. BETTER LEFT UNANSWERED

```
! meantone19-31edo.scl
```

```
!  
31 TET Meantone[19] 1 2 1 2 2 1 2 2 1  
2 1 2 2 1 2 2 1 2 2  
19  
!  
38.70968  
116.12903  
154.83871  
232.25806  
309.67742  
348.38710  
425.80645  
503.22581  
541.93548  
619.35484  
658.06452  
735.48387  
812.90323  
851.61290  
929.03226  
1006.45161  
1045.16129  
1122.58065  
2/1
```

6. OUTSIDE

The tuning here is a straight harmonic series but I added some harmonic movement by using the pitch bend at a couple of points throughout.

This is one of the tracks from my old Ableton Live + Windows rig. I got the choral sound while messing with one of the Xen-Arts synths.

```
! Harmonics 1-16.scl
!  
Harmonics 1-16  
16  
!  
2/1  
3/1  
4/1  
5/1  
6/1  
7/1  
8/1  
9/1  
10/1  
11/1  
12/1  
13/1  
14/1  
15/1  
16/1
```

7. SEPTILLION REPTILIANS

This track is cheezy to be honest but I like it and wanted to include it on the album. Listen to how cheese it is and enjoy.

A lot of ZynAddSubFX all over this one. It was the first track I made with my Linux based music production rig. There were technical hurdles to overcome and lessons to be learned. I was also getting my head around Bitwig Studio which is now my main DAW.

313edo is a really good tuning for this scale, but you can also approximate it using 24edo mode 4 1 4 1 4 1 4 1 4

It contains only whole tones and quarter tones. Some of the useful triads include ultramajor (10:13:15), ultraminor (26:30:39), sus2 (8:9:12) and sus4 (6:8:9). I hear the 13-limit

ultramajor and ultraminor thirds as extremely consonant yet super xen.

The tuning is forgiving - you can just jam on it and it sounds good.

```
! 313edo\_island\[9\].scl
!  
313edo_island[9]  
9  
!  
203.19489  
249.20128  
452.39617  
498.40256  
701.59744  
747.60383  
950.79872  
996.80511  
2/1
```

8. STREAMING

Sometimes I get nostalgic for diatonic sounds so I chose 31edo here as it's a good tuning for meantone. There is a single moment in this track where some other notes from 31edo were borrowed in the melody - you'll probably notice it as it sticks out.

```
! 31 equal divisions of 2\_1.scl
```

```
!  
31 equal divisions of 2/1  
31
```

```
!  
38.70967741935484  
77.41935483870968  
116.12903225806451  
154.83870967741936  
193.5483870967742  
232.25806451612902  
270.9677419354839  
309.6774193548387  
348.38709677419354  
387.0967741935484  
425.80645161290323  
464.51612903225805  
503.2258064516129  
541.9354838709678  
580.6451612903226  
619.3548387096774  
658.0645161290323  
696.7741935483871  
735.483870967742  
774.1935483870968  
812.9032258064516  
851.6129032258065  
890.3225806451613  
929.0322580645161  
967.741935483871  
1006.4516129032259  
1045.1612903225807  
1083.8709677419356  
1122.5806451612902  
1161.2903225806451  
1200.
```

9. HORIZONS

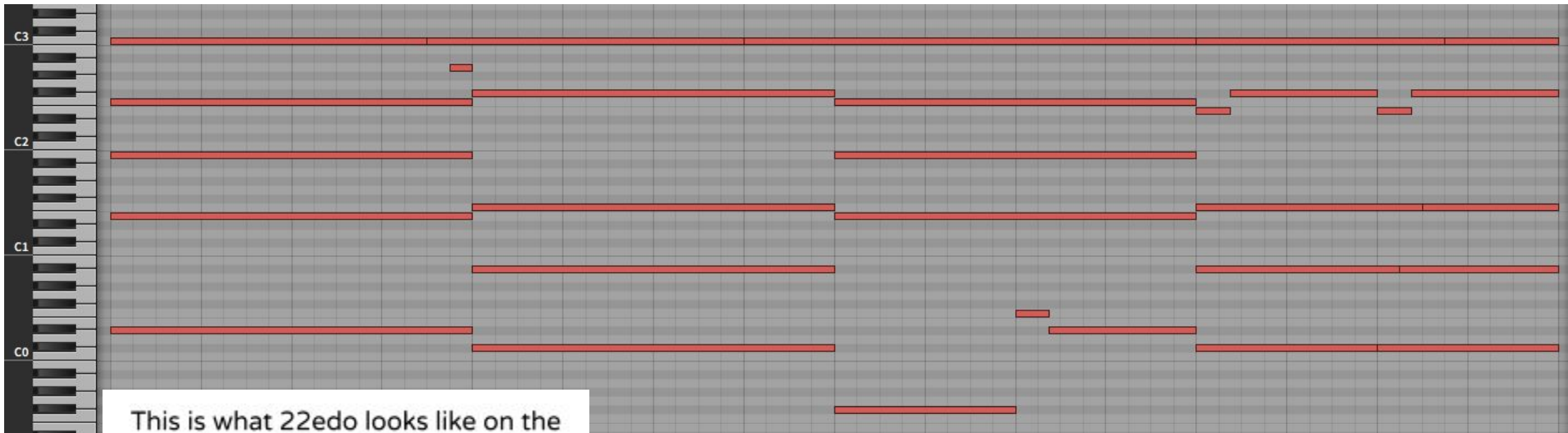
22edo really is my fave. Perfect mix of old and new. If I could only use one tuning for the rest of my life, this is it.

Next page has screenshots of the two chord progressions in Horizons.

```
! 22 equal divisions of 2\_1.scl
```

```
!  
22 equal divisions of 2/1  
22
```

```
!  
54.54545454545455  
109.0909090909091  
163.6363636363636  
218.1818181818182  
272.7272727272727  
327.2727272727272  
381.8181818181818  
436.3636363636364  
490.9090909090909  
545.4545454545455  
600.  
654.5454545454545  
709.0909090909091  
763.6363636363636  
818.1818181818182  
872.7272727272727  
927.2727272727273  
981.8181818181819  
1036.3636363636365  
1090.909090909091  
1145.4545454545455  
1200.
```

This is what 22edo looks like on the piano roll (track 9 Horizons)

