```
<CsoundSynthesizer>
<CsOptions>
</CsOptions>
<CsInstruments>

; Incantation.4.csd, derived by J. Ervin, Jr., 03/23/15.

; Derived from the ORC and SCO files by Professor Jean Piché who
; designed the logic in Instrument 1.

; Disclaimer: not only did I not write the instrument logic, I can
; understand only parts of it :-)

; Syntax disallowed in newest versions of Csound fixed.
; Overall sound levels reduced to 75% (-8 dB) to avoid clipping
; when gals and dudes chant together.

; Do NOT run this with 0dbfs set to 1. It assumes the old default
; value of 32768.

; Looping the MP3 in iTunes or Windows Media Player has a nice
; "new age" vibe. Interesting harmonization arises more or less
; randomly.

sr      =       44100
kr      =       4410
ksmps   =       10
nchnls  =       1

        instr   4
gkpit   rand    .005
        endin


        instr   1
ilast   =       2
iseed   =       p6
ivib    =       .03*iseed
ivoi    =       p8

krik    rand    8,.38413*iseed
kpik    rand     2,.5765*iseed

newvalue:

idu     table   i(krik) ,34,0,0,1
kpikTemp = kpik+ilast
ipi     table   i(kpikTemp),p9,0,0,1
kpi     =       cpspch(ipi+p11)
ipo     =       cpspch(ipi+p11)
```

```
kvibenv expseg  ipo*.001,1.5,ipo*ivib,idu-2,ipo*ivib, .5, ipo*.015
kbend   rand    .3,.89*iseed
kford   rand    1.5,.0345*iseed
kbendTemp = kbend+.33
ibend   =       i(kbendTemp)*i(kbendTemp)+.02
igli    =       (idu/2)+.2
kfordTemp = kford+1.5
ishifsp =       (i(kfordTemp)*i(kfordTemp)/idu)+.2
ilast   =       i(kpikTemp)

        timout  0,idu,go
        reinit  newvalue
rireturn
go:
kpi     port    kpi,ibend,cpspch(ipi+p11)
kam     randh   .45, 1,.46543*iseed
kam     port    kam+.55,.5,p7


kshif   randh   5,ishifsp,-.4478*iseed
kshif   =       int(kshif+5)*9

kind    =       kshif
kif0    =       kpi *(1+i(gkpit))
iind    =       (p5*9)-9

ifif1   table   iind,ivoi,0
ifif2   table   iind+1,ivoi,0
ifif3   table   iind+2,ivoi,0
iria1   table   iind+3,ivoi,0
iria2   table   iind+4,ivoi,0
iria3   table   iind+5,ivoi,0

kdev1   table   kind+6,ivoi,0
kdev2   table   kind+7,ivoi,0
kdev3   table   kind+8,ivoi,0

kdev1   randh   kdev1/2,ishifsp,.0980*iseed
kdev2   randh   kdev2/2,ishifsp,.6983*iseed
kdev3   randh   kdev3/2,ishifsp,.4*iseed

kfif1   table   kind,ivoi,0
kfif2   table   kind+1,ivoi,0
kfif3   table   kind+2,ivoi,0
kria1   table   kind+3,ivoi,0
kria2   table   kind+4,ivoi,0
kria3   table   kind+5,ivoi,0

kif1    port    kfif1+kdev1,igli,ifif1
kif2    port    kfif2+kdev2,igli,ifif2
```

```
kif3    port    kfif3+kdev3,igli,ifif3
kia1    port    kria1-10,igli,iria1
kia2    port    kria2,igli,iria2
kia3    port    kria3,igli,iria3

krandvib randi  .2,3.5,iseed*.123
kvib    oscil   kvibenv,5.5*(1+krandvib),4

kenv    linseg  0.001,.1+p3*.1,1,p3-(.2+p3*.25),1,.1+p3*.15,0.001

kdev    randi   .009,12,iseed*.765
kdev    =       1+kdev
kpit    linseg  .95,.1,1,p3-.2,1,.1,0.92


kpitch  =       kdev*kif0*kpit+kvib

ar      fof     ampdb(kia1*.75)*kenv*kam, kpitch, kif1, 0, 50, .
0025, .025, .007, 50, 1, 2, p3
ar1     fof     ampdb(kia2*.75)*kenv*kam*kam, kpitch, kif2, 0, 100, .
0025, .025, .007, 50, 1, 2, p3
ar2     fof     ampdb(kia3*.75)*kenv*kam*kam*kam, kpitch, kif3, 0,
150, .0025, .025, .007, 50, 1, 2, p3
ar3     fof     ampdb(kia3*.75)*kenv*kam*kam*kam*.7, kpitch,
kif3+1000, 0,150, .0025, .025, .007, 50, 1, 2, p3

       out     (ar+ar1+ar2)+ar3
;        out     ar3
        endin

</CsInstruments>
<CsScore>
f1 0 8192 10 1
f2 0 8192 19 .25 1 0 0
f3 0 8192 10 2 0 0 0 0 0 0 0 0 .1 .1 0 0 .1
f4 0 8192 7 0 2048 1 4096 -1 2048 0

;formant homme, p8
f99 0 128 -2 738 1115 2450 80 70 60 73 110 266 677 1717 2404 80 70 55
80 162 183 634 1217 2388 80 70 50 58 144 230 543 789 2384 80 70 30 73
146 323 535 1868 2498 80 70 60 65 150 168 489 1358 1706 80 65 40 80
146 233 386 1977 2564 80 70 50 94 196 155 267 2290 2933 80 65 60 53
233 266 440 1032 2241 80 60 40 76 185 246 304 870 2239 80 65 40 63 250
483

;formant femme, p8
f89 0 128 -2 877.324 1235.11 2749.51 80 70 60 103.0 118.333 296.667
901.136 2024.02 2832.39 80 70 65 123.333 175.333 243.333 756.886
1418.48 2768.64 80 70 50 100.667 176.0 290.0 583.646 906.042 2735.29
80 50 40 113.333 173.333 350.0 607.167 2367.79 3016.24 70 60 60 100.0
```

```
156.667 200.0 503.704 1632.04 1969.39 80 60 50 97.3333 266.667 333.333
437.378 2498.78 3082.44 80 60 50 71.6667 160.0 200.0 307.792 2782.17
3316.23 80 55 60 62.0 246.667 318.333 459.023 1141.84 2673.75 80 60 50
78.3333 215.333 296.667 378.113 962.245 2659.72 80 65 40 66.6667
266.667 280.0

;Table hauteur
f31 0 32 -2 5 5.02 5.03 5.05 5.07 5.09 5.1 6 5.1 5.07 6 6.02 6.03 6.05
6.07 6.03 6 5.1 5.09 5.07 5.05 5.04 5 5.03 5.05 5.1 5.05 5.07 5.03
5.02 5 4.1
f32 0 32 -2 6 6.02 6.03 6.05 6.07 6.09 6.1 7 6.1 6.07 7 7.02 7.03 7.05
7.07 7.03 7 6.1 6.09 6.07 6.05 6.04 6 6.03 6.05 6.1 6.05 6.07 6.03
6.02 6 5.1
f33 0 32 -2 7 7.02 7.03 7.05 7.07 7.09 7.1 8 7.1 7.07 8 8.02 8.03 8.05
8.07 8.03 8 7.1 7.09 7.07 7.05 7.04 7 7.03 7.05 7.1 7.05 7.07 7.03
7.02 7 6.1

;Table rythme
f34 0 16 -2 .50 .0375 .0375 .0625 8 .0375 3 .125 .125 4 2 .0625 .25
1 .125

t 0 30

; gals 1, 45 seconds
s

i4 0.0 46

;;                 ptchcl kmod iseed         kam            ivoi
hauteur  n/a
i1    0.0    30    100    2    0.78397649    .150          89    31
3    2.05

i1    .    30    100    2    0.7           .150          89    32    3
2.05

i1    .    30    100    2    0.6           .150          89    33    3
2.05

i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.4           .150          89    32    3
2.05

i1    5    30    100    2    0.3           .150          89    33    3
2.05

i1    .    30    100    2    0.2           .150          89    31    3
2.05
```

```
i1    .    30    100    2    0.1           .150          89    32    3
2.05

i1    .    30    100    2    0.2           .150          89    33    3
2.05

i1    .    30    100    2    0.3           .150          89    31    3
2.05

i1    10    30    100    2    0.4           .150          89    32
3    2.05

i1    .    30    100    2    0.5           .150          89    33    3
2.05

i1    .    30    100    2    0.6           .150          89    31    3
2.05

i1    .    30    100    2    0.7           .150          89    32    3
2.05

i1    .    30    100    2    0.8           .150          89    33    3
2.05

i1    15    30    100    2    0.9           .150          89    31
3    2.05

; dudes 1, 45 seconds

s

i1    0.0    30    100    7    0.49311746    0.79607038    99    31
10    1.05

i1    .    30    100    3    0.4           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.3           0.79607038    99    31    9
1.05

i1    .    30    100    7    0.2           0.79607038    99    32    9
1.05

i1    .    30    100    3    0.1           0.79607038    99    31    8
1.05

i1    5    30    100    5    0.2           0.79607038    99    32    9
1.05
```

```
i1    .    30    100    7    0.3           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.4           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.5           0.79607038    99    31    9
1.05

i1    .    30    100    7    0.6           0.79607038    99    32    9
1.05

i1    10    30    100    3    0.7           0.79607038    99    31
8    1.05

i1    .    30    100    5    0.8           0.79607038    99    32    9
1.05

i1    .    30    100    7    0.9           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.8           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.7           0.79607038    99    31    9
1.05

i1    15    30    100    7    0.6           0.79607038    99    31
9    1.05

; gals 2, 65 seconds

s

i1    0.0    30    100    2    0.78397649    .150          89    31
3    2.05

i1    .    30    100    2    0.4           .150          89    32    3
2.05

i1    .    30    100    2    0.5           .150          89    33    3
2.05

i1    .    30    100    2    0.6           .150          89    31    3
2.05

i1    .    30    100    2    0.5           .150          89    32    3
2.05

i1    5    30    100    2    0.4           .150          89    33    3
```

```
2.05

i1    .    30    100    2    0.3           .150          89    31    3
2.05

i1    .    30    100    2    0.4           .150          89    32    3
2.05

i1    .    30    100    2    0.5           .150          89    33    3
2.05

i1    .    30    100    2    0.6           .150          89    31    3
2.05

i1    10    30    100    2    0.7           .150          89    32
3    2.05

i1    .    30    100    2    0.8           .150          89    33    3
2.05

i1    .    30    100    2    0.7           .150          89    31    3
2.05

i1    .    30    100    2    0.6           .150          89    32    3
2.05

i1    .    30    100    2    0.5           .150          89    33    3
2.05

i1    15    30    100    2    0.78397649   .150          89    31    3
2.05

i1    20    30    100    2    0.78397649    .150          89    31
3    2.05

i1    .    30    100    2    0.3           .150          89    32    3
2.05

i1    .    30    100    2    0.4           .150          89    33    3
2.05

i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.7           .150          89    32    3
2.05

i1    25    30    100    2    0.6           .150          89    33
3    2.05
```

```
i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.6           .150          89    32    3
2.05

i1    .    30    100    2    0.7           .150          89    33    3
2.05

i1    .    30    100    2    0.8           .150          89    31    3
2.05

i1    30    30    100    2    0.7           .150          89    32
3    2.05

i1    .    30    100    2    0.6           .150          89    33    3
2.05

i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.4           .150          89    32    3
2.05

i1    .    30    100    2    0.3           .150          89    33    3
2.05

i1    35    30    100    2    0.78397649   .150          89    31    3
2.05

; dudes 2, 65 seconds

s

i1    0.0    30    100    7    0.49311746    0.79607038    99    31
10    1.05

i1    .    30    100    3    0.8           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.7           0.79607038    99    31    9
1.05

i1    .    30    100    7    0.6           0.79607038    99    32    9
1.05

i1    .    30    100    3    0.5           0.79607038    99    31    8
1.05

i1    5    30    100    5    0.4           0.79607038    99    32    9
```

1.05

i1 . 30 100 7 0.5 0.79607038 99 31 9
1.05

i1 . 30 100 3 0.6 0.79607038 99 32 8
1.05

i1 . 30 100 5 0.7 0.79607038 99 31 9
1.05

i1 . 30 100 7 0.8 0.79607038 99 32 9
1.05

i1 10 30 100 3 0.7 0.79607038 99 31
8 1.05

i1 . 30 100 5 0.6 0.79607038 99 32 9
1.05

i1 . 30 100 7 0.5 0.79607038 99 31 9
1.05

i1 . 30 100 3 0.4 0.79607038 99 32 8
1.05

i1 . 30 100 5 0.5 0.79607038 99 31 9
1.05

i1 15 30 100 7 0.49311746 0.79607038 99 31 9
1.05

i1 20 30 100 7 0.49311746 0.79607038 99 31
10 1.05

i1 . 30 100 3 0.3 0.79607038 99 32 8
1.05

i1 . 30 100 5 0.4 0.79607038 99 32 8
1.05

i1 . 30 100 7 0.5 0.79607038 99 32 9
1.05

i1 . 30 100 3 0.6 0.79607038 99 31 8
1.05

i1 25 30 100 5 0.7 0.79607038 99 32
9 1.05

```
i1    .    30    100    7    0.8           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.3           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.4           0.79607038    99    31    9
1.05

i1    .    30    100    7    0.5           0.79607038    99    32    9
1.05

i1    30    30    100    3    0.4           0.79607038    99    31
8    1.05

i1    .    30    100    5    0.5           0.79607038    99    32    9
1.05

i1    .    30    100    7    0.6           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.7           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.3           0.79607038    99    31    9
1.05

i1    35    30    100    7    0.49311746   0.79607038    99    31    9
1.05

; gals 2 + dudes 2

s

i1    0.0    30    100    2    0.78397649    .150          89    31
3    2.05

i1    .    30    100    2    0.4           .150          89    32    3
2.05

i1    .    30    100    2    0.5           .150          89    33    3
2.05

i1    .    30    100    2    0.6           .150          89    31    3
2.05

i1    .    30    100    2    0.5           .150          89    32    3
2.05

i1    5    30    100    2    0.4           .80          89    33    3
```

```
2.05

i1    .    30    100    2    0.3           .80          89    31    3
2.05

i1    .    30    100    2    0.4           .80          89    32    3
2.05

i1    .    30    100    2    0.5           .80          89    33    3
2.05

i1    .    30    100    2    0.6           .80          89    31    3
2.05

i1    10    30    100    2    0.7           .150          89    32
3    2.05

i1    .    30    100    2    0.8           .150          89    33    3
2.05

i1    .    30    100    2    0.7           .150          89    31    3
2.05

i1    .    30    100    2    0.6           .150          89    32    3
2.05

i1    .    30    100    2    0.5           .150          89    33    3
2.05

i1    15    30    100    2    0.78397649   .150          89    31    3
2.05

i1    20    30    100    2    0.78397649    .150          89    31
3    2.05

i1    .    30    100    2    0.3           .150          89    32    3
2.05

i1    .    30    100    2    0.4           .150          89    33    3
2.05

i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.7           .150          89    32    3
2.05

i1    25    30    100    2    0.6           .150          89    33
3    2.05
```

```
i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.6           .150          89    32    3
2.05

i1    .    30    100    2    0.7           .150          89    33    3
2.05

i1    .    30    100    2    0.8           .150          89    31    3
2.05

i1    30    30    100    2    0.7           .150          89    32
3    2.05

i1    .    30    100    2    0.6           .150          89    33    3
2.05

i1    .    30    100    2    0.5           .150          89    31    3
2.05

i1    .    30    100    2    0.4           .150          89    32    3
2.05

i1    .    30    100    2    0.3           .150          89    33    3
2.05

i1    35    30    100    2    0.78397649   .150          89    31    3
2.05

i1    0.0    30    100    7    0.49311746    0.79607038    99    31
10    1.05

i1    .    30    100    3    0.8           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.7           0.79607038    99    32    8
1.05

i1    .    30    100    7    0.6           0.79607038    99    32    9
1.05

i1    .    30    100    3    0.5           0.79607038    99    31    8
1.05

i1    5    30    100    5    0.4           0.4    99    32    9
1.05

i1    .    30    100    7    0.5           0.4    99    31    9
1.05
```

```
i1    .    30    100    3    0.6           0.4    99    32    8
1.05

i1    .    30    100    5    0.7           0.4    99    31    9
1.05

i1    .    30    100    7    0.8           0.4    99    32    9
1.05

i1    10    30    100    3    0.7           0.79607038    99    31
8    1.05

i1    .    30    100    5    0.6           0.79607038    99    32    9
1.05

i1    .    30    100    7    0.5           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.4           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.5           0.79607038    99    31    9
1.05

i1    15    30    100    7    0.49311746   0.79607038    99    31    9
1.05

i1    20    30    100    7    0.49311746    0.79607038    99    31
10    1.05

i1    .    30    100    3    0.3           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.4           0.79607038    99    32    8
1.05

i1    .    30    100    7    0.5           0.79607038    99    32    9
1.05

i1    .    30    100    3    0.6           0.79607038    99    31    8
1.05

i1    25    30    100    5    0.7           0.79607038    99    32
9    1.05

i1    .    30    100    7    0.8           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.3           0.79607038    99    32    8
```

```
1.05

i1    .    30    100    5    0.4           0.79607038    99    31    9
1.05

i1    .    30    100    7    0.5           0.79607038    99    32    9
1.05

i1    30    30    100    3    0.4           0.79607038    99    31
8    1.05

i1    .    30    100    5    0.5           0.79607038    99    32    9
1.05

i1    .    30    100    7    0.6           0.79607038    99    31    9
1.05

i1    .    30    100    3    0.7           0.79607038    99    32    8
1.05

i1    .    30    100    5    0.3           0.79607038    99    31    9
1.05

i1    35    30    100    7    0.49311746   0.79607038    99    31    9
1.05

e

</CsScore>
</CsoundSynthesizer>
```