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/\##/\##      /\##/\##/\##
/\##/\## SynthDEFaults /\##/\##/\##
/\##/\## Patterns Examples /\##/\##/\##
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```

```
/*
- A Collection of Tradicional SynthDefs-
//under GNU GPL 3 as per SuperCollider license
//By Zé Craum
```

SynthDefs at: <http://sccode.org/1-5aD>

Contributions, comments, advises, criticisms, etc are very welcome: zecraum at gmail com  
\*/

```
//--//../--//../--//../--//../--//../--//..
//--//.. Condensed Examples //--//..
//--//../--//../--//../--//../--//../--//..
```

```
//Pianos
Synth(\piano_MDA)
//Electric Pianos
Synth(\Piano_rhodeySC)
Synth(\everythingrhodes )
//Harpisichord
Synth(\harpisichord_simple)
Synth(\harpisichord_pluck)
//Organ
Synth(\organ_tonewheel0)
Synth(\organ_tonewheel1)
Synth(\organ_tonewheel2)
Synth(\organ_tonewheel3)
Synth(\organ_tonewheel4)
Synth(\organ_donor)
Synth(\organ_reed)
//Woodwinds
Synth(\flute_waveguide)
//Strings
Synth(\strings)
Synth(\violin)
//Percussion
Synth(\kalimba)
Synth(\marimba1)
Synth(\bell_tubular)
Synth(\glockenspiel)
Synth(\xilophone)
Synth(\marimba)
Synth(\prayer_bell)
//Drum Kits
Synth(\snare909,[\mul,0.5,\velocity, rrand(0.5, 1.0)]);
Synth(\neurosnare, [amp: 0.4]);
Synth(\hihat)
Synth(\snare)
Synth(\kick)
Synth(\kick1, [amp: 0.4]);
Synth(\kick2, [amp: 0.4]);
Synth(\kick3, [amp: 0.4]);
```

```

Synth(\kick_808)
Synth(\SOSkick)
Synth(\SOSsnare)
Synth(\SOSshats)
Synth(\SOSstom)
Synth(\kick_electro)
Synth(\snare_electro)
Synth(\hihat_electro)
Synth(\clap_electro)
//Others
Synth(\blips1)
Synth(\sawSynth)
Synth(\noisy)
~voice = Buffer.read(s, Platform.resourceDir ++ "sounds/a11wlk01.wav"); // remember to free the
buffer later.
Synth(\sampler_PlayBuf, [\buf, ~voice])
Synth(\sine_simple)
Synth(\sine_vintage)
Synth(\prophet5pwmstrings)

```

```

//--//..//--//..//--//..//--//..//--//..
//--//.. Extended Examples //--//..
//--//..//--//..//--//..//--//..//--//..

```

```

// // // // // //
//// Pianos ////
// // // // // //

```

```

// Hanon exercise
(
p = Pbind(
  \instrument, \piano_MDA,
  \octave, 3,
  \degree, Ppatlace([
    Pseries(0, 1, 8), // first, third etc. notes
    Pseries(2, 1, 7) // second, fourth etc. notes
  ], inf),
  \legato, 1,
  \dur, 0.25
).play;
)

```

```

// // // // // // // //
//// Electric Pianos ////
// // // // // // // //

```

```

(
Pbind(
  \instrument, \Piano_rhodeySC,
  \scale, Scale.mixolydian,
  \octave, 4,
  \root, 2,
  \legato, Pseq([0.9, 0.5, 0.5, 0.9, 0.9, 0.9, 0.9, 0.5, 1, 0.5, 1, 0.6, 0.3], inf),
  \dur, Pseq([1 + (1/3), 1/3, 1/3, 1/7, 6/7, 5/6, 1/6, 1/2, 2/6, 1/6, 2 + 1/2, 1, 1/2], inf),
  \degree, Pseq([
    [0, 2, 4], 2, 4, 7, 8, 7, 0, [1, 3, 6], 5, [1, 3, 6], Rest(), [-1, 1, 3], [1, 3, 5],
    [0, 2, 4], 2, 4, 8, 9, 7, 0, [1, 3, 6], 5, [1, 3, 6], Rest(), [-1, 1, 3], [1, 3, 5],
  ], inf),
)

```

```

\mix, 0.2,
\modIndex, 0.2,
\lfoSpeed, 0.5,
\lfoDepth, 0.4,
\vel, Pgauss(0.8, 0.1, inf),
\amp, 0.3
).play(TempoClock(1.5));
)

```

```

(
Pfx(
Pbind(
\instrument, \everythingrhodes,
\midinote, Pseq([12,8,7,0,[-12,4,12],[-12,4,12],[-12,4,12],[-11,5,12],[-11,5,12],
[-9,7,12],7]+48,inf),
\dur, Pseq([0.5,0.5,0.5,0.5,1.5,1.0,1.0,1.0,1.0,2.0,0.5] ,inf),
\cutoff, Pstutter(11,Pn(Pseries(500,500,4),inf))
),
\choruscompressesffect
).play
)

```

```

// // // // // // // //
//// Harpsichord ////
// // // // // // // //

```

```

Synth(\harpsichord_simple)
(
Pbind(
\instrument, \harpsichord_simple,
\scale, Scale.harmonicMinor,
\degree, Pseq([0, 1, 2, 3, 4, 5, 6, [-7, -3, 0, 2, 4, 6], 7], inf),
\amp, Pseq([Pn(0.1, 8), 0.06], inf),
\dur, Pseq([0.3, Pn(0.1, 6), 1.3, 1], inf),
\strum, 0.09
).play
)

```

```

(
Pbind(\instrument, \harpsichord_pluck,
\degree, Phprand(-14, 14, 50),
\scale, Scale.harmonicMinor,
\dur, Pseq([Pseries(0.02 * 15, -0.02, 15).clip(0.01, 0.1*15), Pseries(0.01, 0.01, 15), ],1),
\db, -10,
\pan, Pseries(-1, 0.08, 30).clip(-1,1) ,
).play;
)

```

```

// // // // // // // //
//// Organs ////
// // // // // // // //

```

```

(
Pbind(
\instrument, \organ_tonewheel0,
\dur, Prand([ 4, 8, 2, 2, 1, 1, 0.25,0.25, 0.25], inf)/3,
\sus, 3.5 ,

```

```

        \db, Pwhite(-20, -10),
        \mix, Pwhite(0.05, 0.15),
        \octave, 3,
        \degree, Pgauss(15, 5).round,
        \scale, Scale.harmonicMinor,
        \oct, Pbrown(0.01, 1, 0.01),
        \nazard, Pbrown(0.01, 1, 0.01),
        \blockFlute, Pbrown(0.01, 1, 0.01),
        \tierce, Pbrown(0.01, 1, 0.01),
        \larigot, Pbrown(0.01, 1, 0.01),
        \sifflute, Pbrown(0.01, 1, 0.01),
    ).play;
)

```

```

(
Pfx(
    Pfx(
        Pbind(
            \instrument, \organ_tonewheel1,
            \dur, Prand([ 4, 8, 2, 2, 1, 1], inf)/3,
            \sus, 2.5 ,
            \amp, 0.1*(2**Pgauss(0, 0.1)),
            \mix, Pwhite(0.05, 0.15),
            \octave, 3,
            \degree, Pgauss(15, 5).round,
            \scale, Scale.melodicMinor,
            \oct, Pbrown(0.01, 1, 0.01),
            \nazard, Pbrown(0.01, 1, 0.01),
            \blockFlute, Pbrown(0.01, 1, 0.01),
            \tierce, Pbrown(0.01, 1, 0.01),
            \larigot, Pbrown(0.01, 1, 0.01),
            \sifflute, Pbrown(0.01, 1, 0.01),
        ),
        \choruscompresseffect
    ), \reverb
).play
)

```

```

(
Pfx(
    Pbind(
        \instrument, \organ_tonewheel3,
        \dur, Pseq([0.3, 0.15, 0.15], inf)/0.9,
        \sus, 1.2,
        \amp, 0.1*(2**Pgauss(0, 0.1)),
        \mix, Pwhite(0.05, 0.15),
        \octave, 3,
        \degree, Prand((0..24), inf)
    ),
    \choruscompresseffect
).play;
)

```

```

(
Pfx(

```

```

Pbind(
  \instrument, \organ_tonewheel2,
  \dur, Pseq([0.3, 0.15, 0.15], inf)/0.9,
  \sus, 1.2,
  \amp, 0.1*(2**Pgauss(0, 0.1)),
  \mix, Pwhite(0.05, 0.15),
  \octave, 3,
  \degree, Prand((0..24), inf),
  \vrate, 5,
),
  \choruscompresseffect
).play;
)

```

```

(
Pbind(
  \instrument, \organ_tonewheel4,
  \midinote, Pseq([48,50,52,60,64,67,58,72], inf),
  \dur, 1.0,
  \rq, Pstutter(3, Pn(Pseries(0.75, -0.1, 6), inf)),
  \lfowidth, Pstutter(7, Pn(Pseries(0.0, 0.05, 10), inf)),
  \cutoff, Pstutter(4, Pn(Pseries(2000, 1000, 4), inf))
).play
)

```

```

(
Pbind(
  \instrument, \organ_donor,
  \sustain, 0.9,
  \amp, 0.2,
  \midinote, Pn(Pshuf([0,4,7],[-1,2,7],[-3,0,5],[-1,2,7],[2,5,9],[-5,-1,4]]+60), inf),
  \dur, Pn(Pshuf([2.0,2.0,4.0,2.0], 1), inf),
  \lfowidth, Pn(Pseries(0.0, 0.001, 16), inf),
  \lforate, Pn(Pseries(1, 0.25, 16), inf),
  \rq, Pn(Pseries(0.3, -0.01, 8), inf),
  \cutoff, Pn(Pseries(6000, 200, 9), inf)
).play
)

```

```

// // // // // // // //
//// Woodwinds ////
// // // // // // // //

```

```

(
Pbind(
  \instrument, \organ_reed,
  \amp, 0.1*(2**Pgauss(0, 0.1)),
  \dur, 5.0,
  \legato, 1,
  \root, 1,
  \attack, 0.2,
  \release, 0.2,
  \degree, Pseq([[-7, -3, 0, 2], [-7, -2, 0, 3], [-7, -1, 1, 4]].mirror1, inf)
).play;
)

```

```

(
Pbind(
  \instrument, \flute_waveguide,
  \degree, Pseq([0, 1, 2, 3, 4], inf),
  \dur, Pwhite(0.5, 1),
  \amp, Pwhite(0.1, 0.4),
  \ipress, Pseq([Pn(0.9, 5), Pn(0.6, 5)], inf),
  \ibreath, Pseq([Pn(0.09, 10), Pn(0.01, 10)], inf)
).trace.play
)

(
Pbind(
  \instrument, \waveguideFlute,
  \degree, Pbrown(-5, 14, 3),
  \dur, Pwrand([1/4, 1/8, 1/2], [0.7, 0.1, 0.2], inf),
  \db, Pwhite(-23, -20),
  /\ipress, Pseq([Pn(0.9, 5), Pn(0.6, 5)], inf),
  \ibreath, Pbrown(0.09, 0.01, 0.005)
).play
)

// // // // // // // //
////   Strings   ////
// // // // // // // //

(//Need to wait a bit
  Pbind(
    \instrument, \strings,
    \degree, Pseq([
      Pn(\rest, 2),
      Pshuf([0, 2, 3, 5], 10),
      Pseq([\rest], { 9.rand })
    ], inf)
    + Prand([0, 0, 0, [0, 3], [0, 1]], inf),
    \dur, Pseq([1, 2, 0.3, 0.5, 0.5], inf) + (Prand([0.3, 0, 0.2], inf) * 0.1),
    \detune, Pseg(Pwhite(-2, 2, inf), 1.3)
  ).play
);

(
p = Pbind(
  \instrument, \violin,
  \midinote, Prand( Scale.majorPentatonic.degrees, inf) + 60,
  \dur, 3,
  \legato, 1
).play;
)

// play a chord (farfisa-like sound)
(
[60, 64, 67].do ({
  | note |
  Synth(\violin, [\midinote, note]);
})
)

```

```
// // // // // // // //
//// Percussion ////
// // // // // // // //
```

```
(
Pbind(
  \instrument, \kalimba,
  \dur, Pseq([0.3, 0.15], inf),
  \amp, 0.1*(2**Pgauss(0, 0.1)),
  \mix, Pwhite(0.05, 0.15),
  \degree, Pseq([0, -3, [1, 4], 2, Rest(), 1, -3, -2, -4, -2, [0, 5], 1, Rest(), 0, -2, Rest()], inf)
).play;
)
```

```
(
Pbind(
  \instrument, "marimba1",
  \degree, Pwhite(-10, 10),
  \dur, Pwhite(0.2, 0.3),
  \db, Pwhite(-20, -25)
).play;
)
```

```
(
Pbind(
  \instrument, \bell_tubular,
  \midinote, Prand( (60..72), inf),
  \dur, 1
).play;
)
```

```
(
Pbind(
  \instrument, \glockenspiel,
  \degree, Prand( (0..7), inf),
  \t60, 6,
  \dur, 0.25
).play;
)
```

```
// xilophone
(
Pbind(
  \instrument, \xilophone,
  \degree, Prand( (-7..14), inf),
  \dur, 0.25
).play;
)
```

```
// marimba
(
Pbind(
  \instrument, \marimba,
  \degree, Prand( (-7..14), inf),
  \dur, 0.12
).play;
)
```

```
(
Pdef(\bell_1,
  Pmono(\prayer_bell,
    \dur, Pseq([8, 20], inf),
    \freq, Pseq([2500, 500], inf),
    \amp, 0.5,
    \lag, 0,
    \trig, Pseq([0.1], inf) * Pwhite(0.5, 1, inf) * Pwrand([0, 1], [1, 5].normalizeSum, inf),
    \sing_switch, Pseq((0!4) ++ (1!4), inf)
  )
);
```

```
Pdef(\bell_2,
  Pmono(\prayer_bell,
    \dur, Pwhite(8, 20, inf),
    \trig, Pwhite(0.05, 0.09),
    \sing_switch, Pwrand([0, 1], [5, 3].normalizeSum, inf),
    \freq, Prand((240, 360 .. 2000), inf),
    \amp, 0.5
  )
);
```

```
Pdef(\bell_3,
  Ppar([
    Pmono(\prayer_bell,
      \freq, 100,
      \dur, 1,
      \trig, 0,
      \sing_switch, Pwrand([0, 1], [10, 3].normalizeSum, inf),
      \amp, Pwhite(0.1, 0.5)
    ),
    Pmono(\prayer_bell,
      \freq, 200,
      \dur, 1,
      \trig, 0,
      \sing_switch, Pwrand([0, 1], [10, 3].normalizeSum, inf),
      \amp, Pwhite(0.1, 0.5)
    ),
    Pmono(\prayer_bell,
      \freq, 300,
      \dur, 1,
      \trig, 0,
      \sing_switch, Pwrand([0, 1], [10, 3].normalizeSum, inf),
      \amp, Pwhite(0.1, 0.5)
    )
  ])
);
```

```
Pdef(\bell_1).play;
Pdef(\bell_2).play;
Pdef(\bell_3).play;
//by wondersluyter
//http://sccode.org/wondersluyter
)
```

```
// // // // // // // //
```



```
//// Drum Kits ////  
// // // // // // //
```

```
//straight
```

```
Ppar([  
  Pbind(  
    \instrument, "hihat",  
    \dur, Pseq([Rest(1/4), 1/4], inf),  
    \ffreq, 9000,  
    \rel, 0.1,  
    \amp, 0.2  
  ),  
  Pbind(  
    \instrument, "kick",  
    \dur, 1/2,  
    \amp, 0.9,  
    \rel, 0.12,  
    \glissf, 0.99  
  ),  
  Pbind(  
    \instrument, "snare",  
    \dur, Pseq([Rest(1/2), 1/2], inf),  
    \amp, 0.25,  
    \rel, 0.1  
  )  
]).play;  
)
```

```
// a little bit groovy
```

```
//Ppar does not need to be used always
```

```
Pbind(  
  \instrument, "hihat",  
  \dur, Pseq([Rest(1/4), 1/8], inf),  
  \att, 0.01,  
  \rel, 0.1,  
  \ffreq, 9000,  
  \pan, 0,  
  \amp, 0.3  
).play;
```

```
Pbind(  
  \instrument, "snare",  
  \dur, Pseq([Rest(1/2), 1/2], inf),  
  \att, 0.01,  
  \rel, 0.1,  
  \sinfreq, 180,  
  \ffreq, 2000,  
  \amp, 0.25  
).play;
```

```
Pbind(  
  \instrument, "kick",  
  \dur, Pseq([1/2 + (1/4), 1/4], inf),  
  \att, 0.01,  
  \rel, 0.22,  
  \sinfreq, 60,  
  \glissf, 0.9,  
  \amp, 1,  
).play;
```

)

(// "hard coded" samba

//Ppar does not need to be used always

```
Pbind(  
    \instrument, \SOSshats,  
    \dur, Pseq([ 1/8, Rest(1/8)], inf),  
    \freq, 8000,  
    \sustain, 0.4,  
    \db, -35,  
).play;
```

```
Pbind(  
    \instrument, \SOSsnare,  
    \dur, Pseq([1/4, Rest(1/2), 1/4], inf),  
    \db, -35,  
).play;
```

```
Pbind(  
    \instrument, \SOSstom,  
    \dur, Pseq([Rest(1), 1 ], inf),  
    \db, -20,  
    \freq, 120,  
).play;
```

```
Pbind(  
    \instrument, \SOSkick,  
    \dur, Pseq([1/2 + (1/4), 1/4], inf),  
    \freq, 50,  
    \db, -10,  
).play;  
)
```

```
(  
var base;
```

```
base = Pbind(\amp, 0.3);
```

```
Ppar([  
    Pbindf(  
        base,  
        \instrument, Pseq([\kick_electro, \snare_electro, \kick_electro, \kick_electro, \snare_electro],  
inf),  
        \dur, Pseq([4, 3, 3, 2, 4], inf)  
    ),  
    Pbindf(  
        base,  
        \instrument, Pseq([Pn(\hihat_electro, 16), Pn(\clap_electro, 16)], inf),  
        \dur, Pseq([Rest(2), 2, Rest(2), 2], inf)  
    )  
]).play(TempoClock(2.3 * 4));  
)
```

```
(  
Pbind(  
    \instrument, \kick_808,
```

```

\dur, 1/2,
\db, -10,
\rel, 0.7,
\dist, 0.1
).play;
)

```

```

Synth(\SOSkick);
Synth(\SOSsnare);
Synth(\SOShats);
Synth(\SOSTom);
Synth(\kick_electro);
Synth(\snare_electro);
Synth(\hihat_electro);
Synth(\clap_electro);
// // // // // // // //
//// Others ////
// // // // // // // //

```

```

(
Pbind(
  \instrument, \blips1,
  \degree, Pseq([Pn(Pwhite(-10, 10, 1), 12), Pn(Rest(),3) ],inf ),
  \dur, 1/4,
  \db, -21,
  \numharm, Pbrown(5, 40,1),
  \beatsPercentage, Pstutter(12, Pseq([1.001, 1.005, 1.1, 1.5, 2, 2.001, 2.5, 3, 3.5, 4, 4.5, 5,
7,], inf)),
  \atk, 0.01,
  \rel, Pwhite(1/2, 1),
  \pan, Pwhite(-1, 1.0)
).play;
//80's like synth
//By Bruno Ruviaro
//https://github.com/brunoruviano/SynthDefs-for-Patterns/blob/master/blips.scd
//Edits by Zé Craum
)

```

```

(
Pbind(
  \instrument, "sawSynth",
  \midinote, Pseq([
    [50, 53, 55, 57],
    [53, 56, 58, 60],
    Prand([
      [56, 59, 61, 63],
      [49, 52, 54, 56],
    ], 1)
  ],
  inf
),
\dur, Prand([1, 3, 4, 4.5], inf),
\att, 0.1,
\rel, Pkey(\dur) + 1,
\hifreq, 5000,
\amp, 0.2
).play;

```

```
Pbind(
  \instrument, "sawSynth",
  \midinote, Pseq([36, 32, 32, 37], inf),
  \dur, Pseq([1/4, 1/4, 1/2, Rest(3), 1/4], inf),
  \ctranspose, [0, -12],
  \att, 0.01,
  \rel, 0.2,
  \amp, 0.4,
  \lofreq, 100,
  \hifreq, 1000
).play;
)
```

```
~voice = Buffer.read(s, Platform.resourceDir ++ "sounds/a11wlk01.wav"); // remember to free the
buffer later.
```

```
Synth(\sampler_PlayBuf, [\buf, ~voice, \rel, 14]);
Synth(\sampler_PlayBuf, [\buf, ~voice, \rel, 14, \midiratio, 5]);
```

```
(
Pbind(\instrument, \sampler_PlayBuf,
      \buf, ~voice.bufnum,
      \midiratio, 0,
      \pos, Pbrown(0.0, 1.0, 0.1, inf),
      \dur, Pwhite(0.07, 0.09, inf),
      \rel, 0.2,
      \amp, 1.0
).play
)
```

```
(
Pbind(
  \instrument, \sine_simple,
  \degree, Pwhite(0, 14),
  \detune, Pbrown(0, 50, 1),
  \atk, Pseq([Pn(0.001, 35), Pn(0.01, 20), Pn(0.1, 20)], inf),
  \sus, 0.2,
  \rel, 0.2,
  \db, Pwhite(-30, -20) ,
  \dur, 0.1
).play
)
```

```
(
Pbind(
  \instrument, \sine_vintage,
  \degree, Pwhite(-7, 14),
  \atk, Pseq([Pn(0.001, 35), Pn(0.01, 20), Pn(0.1, 20)], inf),
  \vdepth, Pseq([Pn(0.0001, 75), Pn(0.01, 75), Pn(0.1, 75)], inf),
  \vrate, Pseq([Pn(10, 75), Pn(1, 75), Pn(0.1, 75)], inf),
  \sus, 0.2,
  \rel, 0.2,
  \db, Pwhite(-30, -20) ,
  \dur, 0.1
).play
)
```

```
(
Pbind(
  \instrument, "noisy",
```

```

\degree, Pseq([0, 1, 2, 3, 4, -10, -5], inf),
\dur, Pwhite(0.09, 0.15),
\amp, Pwhite(0.05, 0.2)
).play;
)

```

```

(
Pbind(
  \instrument, \prophet5pwmstrings,
  \midinote, Pseq([0,3,8,7,5,8,7,3]+48,inf),
  \dur, Pseq((0.5!8) ++ (0.25!8) ++ (2.0!8),inf),
  \lfowidth, Pn(Pseries(0.0,0.025,7),inf),
  \lforate, Pn(Pseries(2,1,11),inf),
  \rq, Pn(Pseries(0.9,-0.1,5),inf)
).play
)

```