dynamo

Claude Heiland-Allen

2011–2019

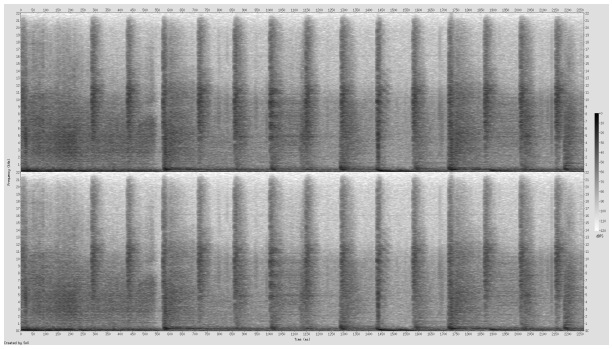
Contents

1 0001-expose-random_nextseed.patch

```
From 5fc149f9e336b64ed67db7edc6497c7c6aef983d Mon Sep 17 00:00:00 2001
From: Claude Heiland-Allen <claude@mathr.co.uk>
Date: Tue, 26 Nov 2019 17:41:44 +0000
Subject: [PATCH] expose random_nextseed

---
 src/x_misc.c | 2 +-
 1 file changed, 1 insertion(+), 1 deletion(-)

diff --git a/src/x_misc.c b/src/x_misc.c
index 39732b4a..80ed012c 100644
--- a/src/x_misc.c
+++ b/src/x_misc.c
@@ -53,9 +53,9 @@ typedef struct _random
 } t_random;


+unsigned int random_nextseed = 1489853723;
```

```
 static int makeseed(void)
 {
-    static unsigned int random_nextseed = 1489853723;
     random_nextseed = random_nextseed * 435898247 + 938284287;
     return (random_nextseed & 0x7fffffff);
 }
--
2.20.1
```

2 breakbeat.wav



3 complex-mod~.pd

```
#N canvas 206 108 428 341 12;
#X obj 142 87 inlet~;
#X obj 315 166 cos~;
#X obj 351 144 +~ -0.25;
#X obj 351 166 cos~;
#X obj 225 87 inlet~;
#X obj 142 215 *~;
#X obj 225 216 *~;
#X obj 142 251 -~;
#X obj 142 284 outlet~;
#X obj 212 285 outlet~;
#X obj 212 252 +~;
#X text 140 310 positive;
#X text 213 311 negative;
#X obj 315 114 phasor~;
#X obj 315 88 inlet~;
#X connect 0 0 5 0;
#X connect 1 0 5 1;
#X connect 2 0 3 0;
#X connect 3 0 6 1;
#X connect 4 0 6 0;
#X connect 5 0 7 0;
#X connect 5 0 10 0;
#X connect 6 0 7 1;
#X connect 6 0 10 1;
#X connect 7 0 8 0;
#X connect 10 0 9 0;
#X connect 13 0 2 0;
#X connect 13 0 1 0;
#X connect 14 0 13 0;
```

4 COPYING

GNU AFFERO GENERAL PUBLIC LICENSE
Version 3, 19 November 2007

Preamble

The GNU Affero General Public License is a free, copyleft license for software and other kinds of works, specifically designed to ensure cooperation with the community in the case of network server software.

The licenses for most software and other practical works are designed to take away your freedom to share and change the works. By contrast, our General Public Licenses are intended to guarantee your freedom to share and change all versions of a program--to make sure it remains free software for all its users.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for them if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs, and that you know you can do these things.

Developers that use our General Public Licenses protect your rights with two steps: (1) assert copyright on the software, and (2) offer you this License which gives you legal permission to copy, distribute and/or modify the software.

A secondary benefit of defending all users' freedom is that improvements made in alternate versions of the program, if they receive widespread use, become available for other developers to incorporate. Many developers of free software are heartened and encouraged by the resulting cooperation. However, in the case of software used on network servers, this result may fail to come about. The GNU General Public License permits making a modified version and letting the public access it on a server without ever releasing its source code to the public.

The GNU Affero General Public License is designed specifically to ensure that, in such cases, the modified source code becomes available to the community. It requires the operator of a network server to provide the source code of the modified version running there to the users of that server. Therefore, public use of a modified version, on a publicly accessible server, gives the public access to the source code of the modified version.

An older license, called the Affero General Public License and published by Affero, was designed to accomplish similar goals. This is a different license, not a version of the Affero GPL, but Affero has released a new version of the Affero GPL which permits relicensing under this license.

The precise terms and conditions for copying, distribution and modification follow.

TERMS AND CONDITIONS

0. Definitions.

"This License" refers to version 3 of the GNU Affero General Public License.

"Copyright" also means copyright-like laws that apply to other kinds of works, such as semiconductor masks.

"The Program" refers to any copyrightable work licensed under this License. Each licensee is addressed as "you". "Licensees" and "recipients" may be individuals or organizations.

To "modify" a work means to copy from or adapt all or part of the work in a fashion requiring copyright permission, other than the making of an exact copy. The resulting work is called a "modified version" of the earlier work or a work "based on" the earlier work.

A "covered work" means either the unmodified Program or a work based on the Program.

To "propagate" a work means to do anything with it that, without permission, would make you directly or secondarily liable for infringement under applicable copyright law, except executing it on a computer or modifying a private copy. Propagation includes copying, distribution (with or without modification), making available to the public, and in some countries other activities as well.

To "convey" a work means any kind of propagation that enables other parties to make or receive copies. Mere interaction with a user through a computer network, with no transfer of a copy, is not conveying.

An interactive user interface displays "Appropriate Legal Notices" to the extent that it includes a convenient and prominently visible feature that (1) displays an appropriate copyright notice, and (2) tells the user that there is no warranty for the work (except to the extent that warranties are provided), that licensees may convey the work under this License, and how to view a copy of this License. If the interface presents a list of user commands or options, such as a menu, a prominent item in the list meets this criterion.

1. Source Code.

The "source code" for a work means the preferred form of the work for making modifications to it. "Object code" means any non-source form of a work.

A "Standard Interface" means an interface that either is an official standard defined by a recognized standards body, or, in the case of interfaces specified for a particular programming language, one that is widely used among developers working in that language.

The "System Libraries" of an executable work include anything, other than the work as a whole, that (a) is included in the normal form of

packaging a Major Component, but which is not part of that Major Component, and (b) serves only to enable use of the work with that Major Component, or to implement a Standard Interface for which an implementation is available to the public in source code form. A "Major Component", in this context, means a major essential component (kernel, window system, and so on) of the specific operating system (if any) on which the executable work runs, or a compiler used to produce the work, or an object code interpreter used to run it.

The "Corresponding Source" for a work in object code form means all the source code needed to generate, install, and (for an executable work) run the object code and to modify the work, including scripts to control those activities. However, it does not include the work's System Libraries, or general-purpose tools or generally available free programs which are used unmodified in performing those activities but which are not part of the work. For example, Corresponding Source includes interface definition files associated with source files for the work, and the source code for shared libraries and dynamically linked subprograms that the work is specifically designed to require, such as by intimate data communication or control flow between those subprograms and other parts of the work.

The Corresponding Source need not include anything that users can regenerate automatically from other parts of the Corresponding Source.

The Corresponding Source for a work in source code form is that same work.

2. Basic Permissions.

All rights granted under this License are granted for the term of copyright on the Program, and are irrevocable provided the stated conditions are met. This License explicitly affirms your unlimited permission to run the unmodified Program. The output from running a covered work is covered by this License only if the output, given its content, constitutes a covered work. This License acknowledges your rights of fair use or other equivalent, as provided by copyright law.

You may make, run and propagate covered works that you do not convey, without conditions so long as your license otherwise remains in force. You may convey covered works to others for the sole purpose of having them make modifications exclusively for you, or provide you with facilities for running those works, provided that you comply with the terms of this License in conveying all material for which you do not control copyright. Those thus making or running the covered works for you must do so exclusively on your behalf, under your direction and control, on terms that prohibit them from making any copies of your copyrighted material outside their relationship with you.

Conveying under any other circumstances is permitted solely under the conditions stated below. Sublicensing is not allowed; section 10 makes it unnecessary.

3. Protecting Users' Legal Rights From Anti-Circumvention Law.

No covered work shall be deemed part of an effective technological

measure under any applicable law fulfilling obligations under article 11 of the WIPO copyright treaty adopted on 20 December 1996, or similar laws prohibiting or restricting circumvention of such measures.

When you convey a covered work, you waive any legal power to forbid circumvention of technological measures to the extent such circumvention is effected by exercising rights under this License with respect to the covered work, and you disclaim any intention to limit operation or modification of the work as a means of enforcing, against the work's users, your or third parties' legal rights to forbid circumvention of technological measures.

4. Conveying Verbatim Copies.

You may convey verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice; keep intact all notices stating that this License and any non-permissive terms added in accord with section 7 apply to the code; keep intact all notices of the absence of any warranty; and give all recipients a copy of this License along with the Program.

You may charge any price or no price for each copy that you convey, and you may offer support or warranty protection for a fee.

5. Conveying Modified Source Versions.

You may convey a work based on the Program, or the modifications to produce it from the Program, in the form of source code under the terms of section 4, provided that you also meet all of these conditions:

a) The work must carry prominent notices stating that you modified it, and giving a relevant date.

b) The work must carry prominent notices stating that it is released under this License and any conditions added under section 7. This requirement modifies the requirement in section 4 to "keep intact all notices".

c) You must license the entire work, as a whole, under this License to anyone who comes into possession of a copy. This License will therefore apply, along with any applicable section 7 additional terms, to the whole of the work, and all its parts, regardless of how they are packaged. This License gives no permission to license the work in any other way, but it does not invalidate such permission if you have separately received it.

d) If the work has interactive user interfaces, each must display Appropriate Legal Notices; however, if the Program has interactive interfaces that do not display Appropriate Legal Notices, your work need not make them do so.

A compilation of a covered work with other separate and independent works, which are not by their nature extensions of the covered work, and which are not combined with it such as to form a larger program, in or on a volume of a storage or distribution medium, is called an

"aggregate" if the compilation and its resulting copyright are not used to limit the access or legal rights of the compilation's users beyond what the individual works permit. Inclusion of a covered work in an aggregate does not cause this License to apply to the other parts of the aggregate.

6. Conveying Non-Source Forms.

You may convey a covered work in object code form under the terms of sections 4 and 5, provided that you also convey the machine-readable Corresponding Source under the terms of this License, in one of these ways:

a) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by the Corresponding Source fixed on a durable physical medium customarily used for software interchange.

b) Convey the object code in, or embodied in, a physical product (including a physical distribution medium), accompanied by a written offer, valid for at least three years and valid for as long as you offer spare parts or customer support for that product model, to give anyone who possesses the object code either (1) a copy of the Corresponding Source for all the software in the product that is covered by this License, on a durable physical medium customarily used for software interchange, for a price no more than your reasonable cost of physically performing this conveying of source, or (2) access to copy the Corresponding Source from a network server at no charge.

c) Convey individual copies of the object code with a copy of the written offer to provide the Corresponding Source. This alternative is allowed only occasionally and noncommercially, and only if you received the object code with such an offer, in accord with subsection 6b.

d) Convey the object code by offering access from a designated place (gratis or for a charge), and offer equivalent access to the Corresponding Source in the same way through the same place at no further charge. You need not require recipients to copy the Corresponding Source along with the object code. If the place to copy the object code is a network server, the Corresponding Source may be on a different server (operated by you or a third party) that supports equivalent copying facilities, provided you maintain clear directions next to the object code saying where to find the Corresponding Source. Regardless of what server hosts the Corresponding Source, you remain obligated to ensure that it is available for as long as needed to satisfy these requirements.

e) Convey the object code using peer-to-peer transmission, provided you inform other peers where the object code and Corresponding Source of the work are being offered to the general public at no charge under subsection 6d.

A separable portion of the object code, whose source code is excluded from the Corresponding Source as a System Library, need not be included in conveying the object code work.

A "User Product" is either (1) a "consumer product", which means any tangible personal property which is normally used for personal, family, or household purposes, or (2) anything designed or sold for incorporation into a dwelling. In determining whether a product is a consumer product, doubtful cases shall be resolved in favor of coverage. For a particular product received by a particular user, "normally used" refers to a typical or common use of that class of product, regardless of the status of the particular user or of the way in which the particular user actually uses, or expects or is expected to use, the product. A product is a consumer product regardless of whether the product has substantial commercial, industrial or non-consumer uses, unless such uses represent the only significant mode of use of the product.

"Installation Information" for a User Product means any methods, procedures, authorization keys, or other information required to install and execute modified versions of a covered work in that User Product from a modified version of its Corresponding Source. The information must suffice to ensure that the continued functioning of the modified object code is in no case prevented or interfered with solely because modification has been made.

If you convey an object code work under this section in, or with, or specifically for use in, a User Product, and the conveying occurs as part of a transaction in which the right of possession and use of the User Product is transferred to the recipient in perpetuity or for a fixed term (regardless of how the transaction is characterized), the Corresponding Source conveyed under this section must be accompanied by the Installation Information. But this requirement does not apply if neither you nor any third party retains the ability to install modified object code on the User Product (for example, the work has been installed in ROM).

The requirement to provide Installation Information does not include a requirement to continue to provide support service, warranty, or updates for a work that has been modified or installed by the recipient, or for the User Product in which it has been modified or installed. Access to a network may be denied when the modification itself materially and adversely affects the operation of the network or violates the rules and protocols for communication across the network.

Corresponding Source conveyed, and Installation Information provided, in accord with this section must be in a format that is publicly documented (and with an implementation available to the public in source code form), and must require no special password or key for unpacking, reading or copying.

7. Additional Terms.

"Additional permissions" are terms that supplement the terms of this License by making exceptions from one or more of its conditions. Additional permissions that are applicable to the entire Program shall be treated as though they were included in this License, to the extent that they are valid under applicable law. If additional permissions apply only to part of the Program, that part may be used separately under those permissions, but the entire Program remains governed by this License without regard to the additional permissions.

When you convey a copy of a covered work, you may at your option remove any additional permissions from that copy, or from any part of it. (Additional permissions may be written to require their own removal in certain cases when you modify the work.) You may place additional permissions on material, added by you to a covered work, for which you have or can give appropriate copyright permission.

Notwithstanding any other provision of this License, for material you add to a covered work, you may (if authorized by the copyright holders of that material) supplement the terms of this License with terms:

a) Disclaiming warranty or limiting liability differently from the terms of sections 15 and 16 of this License; or

b) Requiring preservation of specified reasonable legal notices or author attributions in that material or in the Appropriate Legal Notices displayed by works containing it; or

c) Prohibiting misrepresentation of the origin of that material, or requiring that modified versions of such material be marked in reasonable ways as different from the original version; or

d) Limiting the use for publicity purposes of names of licensors or authors of the material; or

e) Declining to grant rights under trademark law for use of some trade names, trademarks, or service marks; or

f) Requiring indemnification of licensors and authors of that material by anyone who conveys the material (or modified versions of it) with contractual assumptions of liability to the recipient, for any liability that these contractual assumptions directly impose on those licensors and authors.

All other non-permissive additional terms are considered "further restrictions" within the meaning of section 10. If the Program as you received it, or any part of it, contains a notice stating that it is governed by this License along with a term that is a further restriction, you may remove that term. If a license document contains a further restriction but permits relicensing or conveying under this License, you may add to a covered work material governed by the terms of that license document, provided that the further restriction does not survive such relicensing or conveying.

If you add terms to a covered work in accord with this section, you must place, in the relevant source files, a statement of the additional terms that apply to those files, or a notice indicating where to find the applicable terms.

Additional terms, permissive or non-permissive, may be stated in the form of a separately written license, or stated as exceptions; the above requirements apply either way.

8. Termination.

You may not propagate or modify a covered work except as expressly

provided under this License. Any attempt otherwise to propagate or modify it is void, and will automatically terminate your rights under this License (including any patent licenses granted under the third paragraph of section 11).

However, if you cease all violation of this License, then your license from a particular copyright holder is reinstated (a) provisionally, unless and until the copyright holder explicitly and finally terminates your license, and (b) permanently, if the copyright holder fails to notify you of the violation by some reasonable means prior to 60 days after the cessation.

Moreover, your license from a particular copyright holder is reinstated permanently if the copyright holder notifies you of the violation by some reasonable means, this is the first time you have received notice of violation of this License (for any work) from that copyright holder, and you cure the violation prior to 30 days after your receipt of the notice.

Termination of your rights under this section does not terminate the licenses of parties who have received copies or rights from you under this License. If your rights have been terminated and not permanently reinstated, you do not qualify to receive new licenses for the same material under section 10.

9. Acceptance Not Required for Having Copies.

You are not required to accept this License in order to receive or run a copy of the Program. Ancillary propagation of a covered work occurring solely as a consequence of using peer-to-peer transmission to receive a copy likewise does not require acceptance. However, nothing other than this License grants you permission to propagate or modify any covered work. These actions infringe copyright if you do not accept this License. Therefore, by modifying or propagating a covered work, you indicate your acceptance of this License to do so.

10. Automatic Licensing of Downstream Recipients.

Each time you convey a covered work, the recipient automatically receives a license from the original licensors, to run, modify and propagate that work, subject to this License. You are not responsible for enforcing compliance by third parties with this License.

An "entity transaction" is a transaction transferring control of an organization, or substantially all assets of one, or subdividing an organization, or merging organizations. If propagation of a covered work results from an entity transaction, each party to that transaction who receives a copy of the work also receives whatever licenses to the work the party's predecessor in interest had or could give under the previous paragraph, plus a right to possession of the Corresponding Source of the work from the predecessor in interest, if the predecessor has it or can get it with reasonable efforts.

You may not impose any further restrictions on the exercise of the rights granted or affirmed under this License. For example, you may not impose a license fee, royalty, or other charge for exercise of rights granted under this License, and you may not initiate litigation

(including a cross-claim or counterclaim in a lawsuit) alleging that any patent claim is infringed by making, using, selling, offering for sale, or importing the Program or any portion of it.

11. Patents.

A "contributor" is a copyright holder who authorizes use under this License of the Program or a work on which the Program is based. The work thus licensed is called the contributor's "contributor version".

A contributor's "essential patent claims" are all patent claims owned or controlled by the contributor, whether already acquired or hereafter acquired, that would be infringed by some manner, permitted by this License, of making, using, or selling its contributor version, but do not include claims that would be infringed only as a consequence of further modification of the contributor version. For purposes of this definition, "control" includes the right to grant patent sublicenses in a manner consistent with the requirements of this License.

Each contributor grants you a non-exclusive, worldwide, royalty-free patent license under the contributor's essential patent claims, to make, use, sell, offer for sale, import and otherwise run, modify and propagate the contents of its contributor version.

In the following three paragraphs, a "patent license" is any express agreement or commitment, however denominated, not to enforce a patent (such as an express permission to practice a patent or covenant not to sue for patent infringement). To "grant" such a patent license to a party means to make such an agreement or commitment not to enforce a patent against the party.

If you convey a covered work, knowingly relying on a patent license, and the Corresponding Source of the work is not available for anyone to copy, free of charge and under the terms of this License, through a publicly available network server or other readily accessible means, then you must either (1) cause the Corresponding Source to be so available, or (2) arrange to deprive yourself of the benefit of the patent license for this particular work, or (3) arrange, in a manner consistent with the requirements of this License, to extend the patent license to downstream recipients. "Knowingly relying" means you have actual knowledge that, but for the patent license, your conveying the covered work in a country, or your recipient's use of the covered work in a country, would infringe one or more identifiable patents in that country that you have reason to believe are valid.

If, pursuant to or in connection with a single transaction or arrangement, you convey, or propagate by procuring conveyance of, a covered work, and grant a patent license to some of the parties receiving the covered work authorizing them to use, propagate, modify or convey a specific copy of the covered work, then the patent license you grant is automatically extended to all recipients of the covered work and works based on it.

A patent license is "discriminatory" if it does not include within the scope of its coverage, prohibits the exercise of, or is conditioned on the non-exercise of one or more of the rights that are

specifically granted under this License. You may not convey a covered work if you are a party to an arrangement with a third party that is in the business of distributing software, under which you make payment to the third party based on the extent of your activity of conveying the work, and under which the third party grants, to any of the parties who would receive the covered work from you, a discriminatory patent license (a) in connection with copies of the covered work conveyed by you (or copies made from those copies), or (b) primarily for and in connection with specific products or compilations that contain the covered work, unless you entered into that arrangement, or that patent license was granted, prior to 28 March 2007.

Nothing in this License shall be construed as excluding or limiting any implied license or other defenses to infringement that may otherwise be available to you under applicable patent law.

12. No Surrender of Others' Freedom.

If conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot convey a covered work so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not convey it at all. For example, if you agree to terms that obligate you to collect a royalty for further conveying from those to whom you convey the Program, the only way you could satisfy both those terms and this License would be to refrain entirely from conveying the Program.

13. Remote Network Interaction; Use with the GNU General Public License.

Notwithstanding any other provision of this License, if you modify the Program, your modified version must prominently offer all users interacting with it remotely through a computer network (if your version supports such interaction) an opportunity to receive the Corresponding Source of your version by providing access to the Corresponding Source from a network server at no charge, through some standard or customary means of facilitating copying of software. This Corresponding Source shall include the Corresponding Source for any work covered by version 3 of the GNU General Public License that is incorporated pursuant to the following paragraph.

Notwithstanding any other provision of this License, you have permission to link or combine any covered work with a work licensed under version 3 of the GNU General Public License into a single combined work, and to convey the resulting work. The terms of this License will continue to apply to the part which is the covered work, but the work with which it is combined will remain governed by version 3 of the GNU General Public License.

14. Revised Versions of this License.

The Free Software Foundation may publish revised and/or new versions of the GNU Affero General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the

Program specifies that a certain numbered version of the GNU Affero General Public License "or any later version" applies to it, you have the option of following the terms and conditions either of that numbered version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of the GNU Affero General Public License, you may choose any version ever published by the Free Software Foundation.

If the Program specifies that a proxy can decide which future versions of the GNU Affero General Public License can be used, that proxy's public statement of acceptance of a version permanently authorizes you to choose that version for the Program.

Later license versions may give you additional or different permissions. However, no additional obligations are imposed on any author or copyright holder as a result of your choosing to follow a later version.

15. Disclaimer of Warranty.

THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. Limitation of Liability.

IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MODIFIES AND/OR CONVEYS THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

17. Interpretation of Sections 15 and 16.

If the disclaimer of warranty and limitation of liability provided above cannot be given local legal effect according to their terms, reviewing courts shall apply local law that most closely approximates an absolute waiver of all civil liability in connection with the Program, unless a warranty or assumption of liability accompanies a copy of the Program in return for a fee.

END OF TERMS AND CONDITIONS

How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

```
  To do so, attach the following notices to the program. It is safest
to attach them to the start of each source file to most effectively
state the exclusion of warranty; and each file should have at least
the "copyright" line and a pointer to where the full notice is found.

    <one line to give the program's name and a brief idea of what it does.>
    Copyright (C) <year>  <name of author>

    This program is free software: you can redistribute it and/or modify
    it under the terms of the GNU Affero General Public License as published by
    the Free Software Foundation, either version 3 of the License, or
    (at your option) any later version.

    This program is distributed in the hope that it will be useful,
    but WITHOUT ANY WARRANTY; without even the implied warranty of
    MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
    GNU Affero General Public License for more details.

    You should have received a copy of the GNU Affero General Public License
    along with this program.  If not, see <http://www.gnu.org/licenses/>.

Also add information on how to contact you by electronic and paper mail.

  If your software can interact with users remotely through a computer
network, you should also make sure that it provides a way for users to
get its source.  For example, if your program is a web application, its
interface could display a "Source" link that leads users to an archive
of the code.  There are many ways you could offer source, and different
solutions will be better for different programs; see section 13 for the
specific requirements.

  You should also get your employer (if you work as a programmer) or school,
if any, to sign a "copyright disclaimer" for the program, if necessary.
For more information on this, and how to apply and follow the GNU AGPL, see
<http://www.gnu.org/licenses/>.
```

5 dynamo.c

```
#include <SDL2/SDL.h>
#include <SDL2/SDL_audio.h>

#include <emscripten.h>

#include <stdio.h>
#include <time.h>
#include "z_libpd.h"
extern unsigned int random_nextseed;

void audio(void *userdata, Uint8 *stream, int len)
{
  float inbuf[64], outbuf[64][2];
  float *b = (float *) stream;
  int m = len / sizeof(float) / 2;
  int k = 0;
  while (m > 0)
  {
```

```
    for (int i = 0; i < 64; ++i)
      inbuf[i] = 0;
    libpd_process_float(1, &inbuf[0], &outbuf[0][0]);
    for (int i = 0; i < 64; ++i)
      for (int j = 0; j < 2; ++j)
        b[k++] = outbuf[i][j];
    m -= 64;
  }
  if (m < 0)
  {
    fprintf(stderr, "buffer overflow, m went negative: %d\n", m);
  }
}

void pdprint(const char *s) {
  printf("%s", s);
}

void pdnoteon(int ch, int pitch, int vel) {
  printf("noteon: %d %d %d\n", ch, pitch, vel);
}

void main1(void)
{
  // nop
}

int main(int argc, char **argv)
{
  // initialize SDL2 audio
  SDL_Init(SDL_INIT_AUDIO);
  SDL_AudioSpec want, have;
  want.freq = 48000;
  want.format = AUDIO_F32;
  want.channels = 2;
  want.samples = 4096;
  want.callback = audio;
  SDL_AudioDeviceID dev = SDL_OpenAudioDevice(NULL, 0, &want, &have, ↙
      ↳ SDL_AUDIO_ALLOW_ANY_CHANGE);
  printf("want: %d %d %d %d\n", want.freq, want.format, want.channels, want.↙
      ↳ samples);
  printf("have: %d %d %d %d\n", have.freq, have.format, have.channels, have.↙
      ↳ samples);

  // initialize libpd
  libpd_set_printhook(pdprint);
  libpd_init();
  libpd_init_audio(1, 2, have.freq);

  // initialize random number seed
  srand(time(0));
  random_nextseed = rand();

  // open patch       [; pd open file folder(
  libpd_openfile("main.pd", ".");

  // start audio processing
```

```
  SDL_PauseAudioDevice(dev, 0);
  emscripten_set_main_loop(main1, 60, 1);
  return 0;
}
```

6 dynamo.sh

```
#!/bin/bash
xset s off
xset -dpms
cd "$(dirname "$(readlink -e "$0")")"
while true
do
  killall -KILL pd
  sleep 1
  ./start.sh
  sleep 1
done &
wait
```

7 .gitignore

```
dynamo.pd.*
dynamo.data
dynamo.html
dynamo.js
dynamo.wasm
```

8 hilbert~.pd

```
#N canvas 269 0 593 306 12;
#X obj 105 92 biquad~ 0.83774 -0.06338 0.06338 -0.83774 1;
#X obj 105 66 biquad~ 1.94632 -0.94657 0.94657 -1.94632 1;
#X obj 86 149 biquad~ -0.02569 0.260502 -0.260502 0.02569 1;
#X obj 86 175 biquad~ 1.8685 -0.870686 0.870686 -1.8685 1;
#X obj 86 39 inlet~;
#X obj 105 121 outlet~;
#X obj 86 202 outlet~;
#X text 34 232 This is a pair of 4th-order all-pass filters whose outputs
somehow manage to be about 90 degrees out of phase from each other.
Both have different phases from the original. Adapted from a 4X patch
by Emmanuel Favreau \, circa 1982;
#X obj 502 39 inlet;
#X text 461 13 bang to clear;
#X text 80 16 signal in;
#X msg 502 112 clear;
#X connect 0 0 5 0;
#X connect 1 0 0 0;
#X connect 2 0 3 0;
#X connect 3 0 6 0;
#X connect 4 0 1 0;
#X connect 4 0 2 0;
#X connect 8 0 11 0;
#X connect 11 0 1 0;
#X connect 11 0 0 0;
#X connect 11 0 2 0;
```

```
#X connect 11 0 3 0;
```

9 index.html

```
<!DOCTYPE html>
<html>
  <head>
    <meta charset="utf-8">
    <meta content="text/html; charset=utf-8" http-equiv="Content-Type">
    <title>&#x25b6; dynamo</title>
    <meta name="description" content="dynamo creates music from carefully ↙
        ↳ controlled randomness using numbers to invent harmonies, melodies, ↙
        ↳ rhythms" />
    <meta name="keywords" content="pure-data generative techno emscripten empd" ↙
        ↳ />
    <meta name="generator" content="emscripten" />
    <meta name="author" content="mathr" />
    <style>
      *
      {
        color: white;
        background-color: black;
      }
      #play
      {
        font-size: 400%;
        width: 1em;
        height: 1em;
        position: absolute;
        top:0;
        bottom: 0;
        left: 0;
        right: 0;
        border: 0;
        padding: 0;
        margin: auto;
      }
    </style>
  </head>
  <body>
    <div id="play">&#x25b6;</div>
    <script>
      // audio autoplay
      const audioContextList = [];
      (function() {
        self.AudioContext = new Proxy(self.AudioContext, {
          construct(target, args) {
            const result = new target(...args);
            audioContextList.push(result);
            return result;
          }
        });
      })();
      function resumeAudio() {
        audioContextList.forEach(ctx => {
          if (ctx.state !== "running") { ctx.resume(); }
        });
```

```
        }
        [ "click", "contextmenu", "auxclick", "dblclick"
        , "mousedown", "mouseup", "pointerup", "touchend"
        , "keydown", "keyup"
        ].forEach(name => document.addEventListener(name, resumeAudio));
        // emscripten
        var Module
              = { preRun: []
                , postRun: []
                , print: function(e) {
                    1<arguments.length&&(e=Array.prototype.slice.call(arguments).↙
                        ↪ join(" "));
                    console.log(e);
                  }
                , printErr: function(e) {
                    1<arguments.length&&(e=Array.prototype.slice.call(arguments).↙
                        ↪ join(" "));
                    console.error(e)
                  }
                }
              ;
    </script>
    <script async src="dynamo.js"></script>
  </body>
</html>
```

10 kiosk.cfg

```
HideMain True
KioskNewWindow True
ShowMenu False
FullScreen False
WindowTitle ""
PreventClose False
QuitOnClose False
HidePopup True
QuitBinding False
Bindings False
ScrollBars True
```

11 loader.pd

```
#N canvas 0 0 450 300 10;
#X obj 20 23 r load;
#X obj 20 65 max 1;
#X obj 106 93 until;
#X msg 106 137 obj 10 10 random;
#X obj 20 89 t b f;
#X obj 79 167 s pd-\$0-loader;
#N canvas 0 0 450 300 \$0-loader 0;
#X restore 106 22 pd \$0-loader;
#X obj 20 114 t b b;
#X msg 47 137 loadbang;
#X msg 220 137 clear;
#X msg 20 228 \; pd open main.pd .;
#X obj 20 198 delay 1000;
#X obj 103 45 v render;
```

```
#X obj 104 65 v seed;
#X obj 20 44 unpack f f;
#X obj 20 260 quit-on-close;
#X connect 0 0 14 0;
#X connect 1 0 4 0;
#X connect 1 0 13 0;
#X connect 2 0 3 0;
#X connect 3 0 5 0;
#X connect 4 0 7 0;
#X connect 4 1 2 0;
#X connect 7 0 11 0;
#X connect 7 1 8 0;
#X connect 8 0 5 0;
#X connect 9 0 5 0;
#X connect 11 0 10 0;
#X connect 14 0 1 0;
#X connect 14 1 12 0;
```

12 logind.conf

```
[Login]
HandleLidSwitch=ignore
LidSwitchIgnoreInhibited=no
```

13 main.pd

```
#N canvas 3 58 476 707 10;
#X obj 278 19 loadbang;
#N canvas 485 91 415 300 \$0-init 0;
#X obj 119 13 inlet;
#X obj 56 65 t b b;
#N canvas 906 86 457 460 \$0-init-scale 0;
#X obj 19 19 inlet;
#X obj 19 40 t b b b b b;
#X obj 294 118 random 12;
#X obj 294 272 + 40;
#X obj 220 118 random 11;
#X obj 220 139 t f f;
#X obj 220 160 +;
#X obj 247 161 >=;
#X obj 141 116 random 10;
#X obj 141 137 t f f;
#X obj 141 158 +;
#X obj 141 179 t f f;
#X obj 141 200 +;
#X obj 168 158 >=;
#X obj 168 201 >=;
#X obj 71 137 t f f;
#X obj 71 158 +;
#X obj 71 179 t f f;
#X obj 71 200 +;
#X obj 98 158 >=;
#X obj 98 201 >=;
#X obj 71 116 random 9;
#X obj 71 222 t f f;
#X obj 71 243 +;
#X obj 98 244 >=;
```

```
#X obj 19 154 f;
#X obj 19 175 + 12;
#X obj 220 272 + 40;
#X obj 141 272 + 40;
#X obj 71 272 + 40;
#X obj 20 272 + 40;
#X obj 20 318 pack f f f f f;
#X obj 20 339 list prepend 0;
#X obj 20 360 s \$0-scale;
#X connect 0 0 1 0;
#X connect 1 0 25 0;
#X connect 1 1 21 0;
#X connect 1 2 8 0;
#X connect 1 3 4 0;
#X connect 1 4 2 0;
#X connect 2 0 3 0;
#X connect 2 0 7 1;
#X connect 2 0 13 1;
#X connect 2 0 19 1;
#X connect 2 0 25 1;
#X connect 3 0 31 4;
#X connect 4 0 5 0;
#X connect 5 0 6 0;
#X connect 5 1 7 0;
#X connect 6 0 14 1;
#X connect 6 0 20 1;
#X connect 6 0 27 0;
#X connect 7 0 6 1;
#X connect 8 0 9 0;
#X connect 9 0 10 0;
#X connect 9 1 13 0;
#X connect 10 0 11 0;
#X connect 11 0 12 0;
#X connect 11 1 14 0;
#X connect 12 0 24 1;
#X connect 12 0 28 0;
#X connect 13 0 10 1;
#X connect 14 0 12 1;
#X connect 15 0 16 0;
#X connect 15 1 19 0;
#X connect 16 0 17 0;
#X connect 17 0 18 0;
#X connect 17 1 20 0;
#X connect 18 0 22 0;
#X connect 19 0 16 1;
#X connect 20 0 18 1;
#X connect 21 0 15 0;
#X connect 22 0 23 0;
#X connect 22 1 24 0;
#X connect 23 0 29 0;
#X connect 24 0 23 1;
#X connect 25 0 26 0;
#X connect 26 0 30 0;
#X connect 27 0 31 3;
#X connect 28 0 31 2;
#X connect 29 0 31 1;
#X connect 30 0 31 0;
```

```
#X connect 31 0 32 0;
#X connect 32 0 33 0;
#X restore 103 66 pd \$0-init-scale;
#X obj 56 92 t b b;
#N canvas 906 117 450 300 \$0-init-bassline 0;
#X obj 16 18 inlet;
#X obj 16 39 t b b;
#X obj 16 60 f 32;
#X obj 16 81 until;
#X obj 16 102 f 0;
#X obj 56 102 + 1;
#X obj 56 123 mod 32;
#X obj 16 144 t b f;
#X obj 16 275 tabwrite \$0-bassline;
#X obj 16 165 random 100;
#X obj 16 186 >;
#X obj 16 228 random 5;
#X obj 35 250 f -1;
#X obj 16 207 sel 0 1;
#X obj 103 102 random 60;
#X obj 103 123 + 5;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 1 1 14 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 4 0 5 0;
#X connect 4 0 7 0;
#X connect 5 0 6 0;
#X connect 6 0 4 1;
#X connect 7 0 9 0;
#X connect 7 1 8 1;
#X connect 9 0 10 0;
#X connect 10 0 13 0;
#X connect 11 0 8 0;
#X connect 12 0 8 0;
#X connect 13 0 11 0;
#X connect 13 1 12 0;
#X connect 14 0 15 0;
#X connect 15 0 10 1;
#X restore 104 93 pd \$0-init-bassline;
#X obj 56 113 t b b;
#N canvas 906 181 450 300 \$0-init-globals 0;
#X obj 10 11 inlet;
#X obj 10 32 t b b;
#X obj 86 126 swap 15000;
#X obj 86 147 /;
#X obj 86 168 v \$0-tempo;
#X obj 13 124 v \$0-swing;
#X obj 13 103 / 400;
#X obj 87 72 / 5;
#X obj 86 105 + 100;
#X obj 86 40 random 300;
#X obj 13 82 random 150;
#X connect 0 0 1 0;
#X connect 1 0 10 0;
#X connect 1 1 9 0;
```

```
#X connect 2 0 3 0;
#X connect 2 1 3 1;
#X connect 3 0 4 0;
#X connect 6 0 5 0;
#X connect 7 0 8 0;
#X connect 8 0 2 0;
#X connect 9 0 7 0;
#X connect 10 0 6 0;
#X restore 106 143 pd \$0-init-globals;
#X obj 119 281 outlet;
#X obj 56 144 t b b;
#N canvas 906 148 450 300 \$0-init-accent 0;
#X obj 25 18 inlet;
#X obj 25 39 t b b;
#X obj 25 60 f 32;
#X obj 25 81 until;
#X obj 25 102 f 0;
#X obj 57 101 + 1;
#X obj 57 122 mod 32;
#X obj 24 144 t b f;
#X obj 24 165 random 8;
#X obj 24 186 tabwrite \$0-accent;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 4 0 5 0;
#X connect 4 0 7 0;
#X connect 5 0 6 0;
#X connect 6 0 4 1;
#X connect 7 0 8 0;
#X connect 7 1 9 1;
#X connect 8 0 9 0;
#X restore 103 115 pd \$0-init-accent;
#X obj 56 165 t b b;
#N canvas 906 210 450 300 \$0-init-dubpad 0;
#X obj 22 14 inlet;
#X obj 22 35 t b b;
#X obj 22 56 random 16;
#X obj 22 77 + 1;
#X obj 22 98 v \$0-dubpad-l-del;
#X obj 139 53 random 16;
#X obj 139 74 + 1;
#X obj 139 95 v \$0-dubpad-r-del;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 1 1 5 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 5 0 6 0;
#X connect 6 0 7 0;
#X restore 106 163 pd \$0-init-dubpad;
#N canvas 906 243 450 300 \$0-init-triline 0;
#X obj 12 16 inlet;
#X obj 12 37 t b b;
#X obj 12 58 f 32;
#X obj 12 79 until;
```

```
#X obj 12 100 f 0;
#X obj 52 100 + 1;
#X obj 52 121 mod 32;
#X obj 12 142 t b f;
#X obj 12 163 random 100;
#X obj 12 184 >;
#X obj 12 226 random 5;
#X obj 31 248 f -1;
#X obj 12 205 sel 0 1;
#X obj 12 273 tabwrite \$0-triline;
#X obj 99 121 + 2;
#X obj 100 97 random 15;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 1 1 15 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 4 0 5 0;
#X connect 4 0 7 0;
#X connect 5 0 6 0;
#X connect 6 0 4 1;
#X connect 7 0 8 0;
#X connect 7 1 13 1;
#X connect 8 0 9 0;
#X connect 9 0 12 0;
#X connect 10 0 13 0;
#X connect 11 0 13 0;
#X connect 12 0 10 0;
#X connect 12 1 11 0;
#X connect 14 0 9 1;
#X connect 15 0 14 0;
#X restore 108 189 pd \$0-init-triline;
#X obj 56 195 t b b;
#X obj 56 216 t b b;
#N canvas 906 274 450 300 \$0-init-syncline 0;
#X obj 18 17 inlet;
#X obj 19 39 t b b;
#X obj 19 60 f 32;
#X obj 19 81 until;
#X obj 19 102 f 0;
#X obj 59 102 + 1;
#X obj 59 123 mod 32;
#X obj 19 144 t b f;
#X obj 19 165 random 100;
#X obj 19 186 >;
#X obj 38 250 f -1;
#X obj 19 207 sel 0 1;
#X obj 19 275 tabwrite \$0-syncline;
#X obj 19 228 random 50;
#X obj 106 123 + 2;
#X obj 106 102 random 20;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 1 1 15 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 4 0 5 0;
```

```
#X connect 4 0 7 0;
#X connect 5 0 6 0;
#X connect 6 0 4 1;
#X connect 7 0 8 0;
#X connect 7 1 12 1;
#X connect 8 0 9 0;
#X connect 9 0 11 0;
#X connect 10 0 12 0;
#X connect 11 0 13 0;
#X connect 11 1 10 0;
#X connect 13 0 12 0;
#X connect 14 0 9 1;
#X connect 15 0 14 0;
#X restore 106 215 pd \$0-init-syncline;
#X obj 58 13 inlet;
#X obj 52 280 outlet;
#X obj 119 40 t b b b;
#N canvas 906 58 450 300 \$0-init-samples 0;
#X obj 14 20 inlet;
#X obj 14 41 t b b;
#X obj 14 72 symbol \$0-breakbeat-l;
#X obj 34 92 symbol \$0-breakbeat-r;
#X obj 13 118 pack s s;
#X msg 13 139 read -resize breakbeat.wav \$1 \$2;
#X obj 13 160 soundfiler;
#X obj 13 181 v \$0-breakbeat-len;
#X obj 66 22 bng 15 250 50 0 empty empty empty 17 7 0 10 -262144 -1
-1;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 1 1 3 0;
#X connect 2 0 4 0;
#X connect 3 0 4 1;
#X connect 4 0 5 0;
#X connect 5 0 6 0;
#X connect 6 0 7 0;
#X connect 8 0 1 0;
#X restore 247 64 pd \$0-init-samples;
#X obj 56 245 t b b;
#N canvas 906 305 450 300 \$0-init-flangeline 0;
#X obj 16 18 inlet;
#X obj 16 39 t b b;
#X obj 16 60 f 32;
#X obj 16 81 until;
#X obj 16 102 f 0;
#X obj 56 102 + 1;
#X obj 56 123 mod 32;
#X obj 16 144 t b f;
#X obj 16 165 random 100;
#X obj 16 186 >;
#X obj 16 228 random 5;
#X obj 35 250 f -1;
#X obj 16 207 sel 0 1;
#X obj 16 275 tabwrite \$0-flangeline;
#X obj 103 123 + 50;
#X obj 103 102 random 50;
#X connect 0 0 1 0;
```

```
#X connect 1 0 2 0;
#X connect 1 1 15 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 4 0 5 0;
#X connect 4 0 7 0;
#X connect 5 0 6 0;
#X connect 6 0 4 1;
#X connect 7 0 8 0;
#X connect 7 1 13 1;
#X connect 8 0 9 0;
#X connect 9 0 12 0;
#X connect 10 0 13 0;
#X connect 11 0 13 0;
#X connect 12 0 10 0;
#X connect 12 1 11 0;
#X connect 14 0 9 1;
#X connect 15 0 14 0;
#X restore 106 241 pd \$0-init-flangeline;
#X connect 0 0 18 0;
#X connect 1 0 3 0;
#X connect 1 1 2 0;
#X connect 3 0 5 0;
#X connect 3 1 4 0;
#X connect 5 0 8 0;
#X connect 5 1 9 0;
#X connect 8 0 10 0;
#X connect 8 1 6 0;
#X connect 10 0 13 0;
#X connect 10 1 11 0;
#X connect 13 0 14 0;
#X connect 13 1 12 0;
#X connect 14 0 20 0;
#X connect 14 1 15 0;
#X connect 16 0 1 0;
#X connect 18 0 7 0;
#X connect 18 1 1 0;
#X connect 18 2 19 0;
#X connect 20 0 17 0;
#X connect 20 1 21 0;
#X restore 12 45 pd \$0-init;
#X obj 79 20 bng 15 250 50 0 empty empty empty 17 7 0 10 -262144 -1
-1;
#N canvas 485 117 450 300 \$0-clock 0;
#X obj 162 8 inlet;
#X obj 22 92 metro;
#X obj 21 37 t b b b;
#X obj 50 63 v \$0-tempo;
#X obj 22 119 f 0;
#X obj 66 92 f 0;
#X obj 21 266 outlet;
#X obj 21 244 f 0;
#X obj 53 244 + 1;
#X obj 54 119 ==;
#X obj 22 141 sel 0 1;
#X obj 31 221 delay;
#X obj 41 160 t b b;
```

```
#X obj 40 181 v \$0-swing;
#X obj 40 202 *;
#X obj 67 201 v \$0-tempo;
#X obj 34 6 inlet;
#X connect 0 0 2 0;
#X connect 1 0 4 0;
#X connect 2 0 1 0;
#X connect 2 1 3 0;
#X connect 2 2 5 0;
#X connect 3 0 1 1;
#X connect 4 0 9 0;
#X connect 4 0 10 0;
#X connect 5 0 4 1;
#X connect 5 0 7 1;
#X connect 7 0 8 0;
#X connect 7 0 6 0;
#X connect 8 0 7 1;
#X connect 9 0 4 1;
#X connect 10 0 7 0;
#X connect 10 1 12 0;
#X connect 11 0 7 0;
#X connect 12 0 13 0;
#X connect 12 1 15 0;
#X connect 13 0 14 0;
#X connect 14 0 11 0;
#X connect 15 0 14 1;
#X connect 16 0 3 0;
#X restore 54 113 pd \$0-clock;
#N canvas 485 58 479 707 \$0-bassist 0;
#X obj 59 2 inlet;
#X obj 59 101 tabread \$0-bassline;
#X obj 59 122 sel -1;
#X obj 56 150 tabread \$0-scale;
#X obj 56 171 - 12;
#X obj 56 268 pack f f;
#X obj 101 208 v \$0-tempo;
#X obj 56 189 t f b b;
#X obj 69 226 random;
#X obj 69 247 / 4;
#X obj 56 289 vline~;
#X obj 56 310 mtof~;
#X obj 56 331 phasor~;
#X obj 51 473 -~ 0.25;
#X obj 51 494 cos~;
#X obj 3 642 outlet~;
#X obj 78 381 cos~;
#X obj 78 360 *~ 2;
#X obj 182 20 inlet;
#X obj 262 19 inlet;
#X obj 364 17 inlet;
#X obj 182 41 t b b;
#X obj 209 66 v \$0-tempo;
#X obj 183 90 random 16;
#X obj 183 111 + 1;
#X obj 183 132 *;
#X obj 183 195 vline~;
#X obj 183 216 *~;
```

```
#X obj 183 237 lop~ 25;
#X obj 128 381 cos~;
#X obj 262 41 t b b;
#X obj 289 66 v \$0-tempo;
#X obj 263 90 random 16;
#X obj 263 111 + 1;
#X obj 263 132 *;
#X obj 263 195 vline~;
#X obj 263 216 *~;
#X obj 263 237 lop~ 25;
#X obj 208 381 cos~;
#X obj 208 360 *~ 5;
#X obj 362 41 t b b;
#X obj 389 66 v \$0-tempo;
#X obj 363 90 random 16;
#X obj 363 111 + 1;
#X obj 363 132 *;
#X obj 363 195 vline~;
#X obj 363 216 *~;
#X obj 363 237 lop~ 25;
#X obj 308 381 cos~;
#X obj 308 402 *~;
#X obj 308 360 *~ 6;
#X msg 363 174 2 \, 0 \$1;
#X obj 308 423 expr~ 0.2 * tanh($v1);
#X obj 208 422 *~;
#X obj 138 442 *~;
#X msg 263 174 2 \, 0 \$1;
#X msg 183 174 2 \, 0 \$1;
#X obj 78 402 *~ 0.3;
#X obj 363 153 / 4;
#X obj 263 153 / 4;
#X obj 183 153 / 4;
#X obj 208 443 expr~ 0.2 * tanh($v1);
#X obj 138 463 expr~ 0.2 * tanh($v1);
#X obj 128 360 *~ 7;
#X obj 3 360 -~ 0.25;
#X obj 3 381 cos~;
#X obj 2 581 expr~ tanh($v1);
#X obj 107 612 expr~ tanh($v1);
#X obj 106 543 *~;
#X obj 59 23 t f b;
#X obj 284 494 v \$0-tempo;
#X msg 284 553 2 \, 0 \$1;
#X obj 284 577 vline~;
#X obj 284 598 *~;
#X obj 284 619 lop~ 25;
#X obj 106 568 vcf~ 50;
#X obj 3 402 *~ 2;
#X obj 146 517 *~ 8;
#X obj 284 472 t b b;
#X obj 284 524 *;
#X obj 314 513 random 4;
#X obj 314 534 + 1;
#X obj 59 45 mod 64;
#X obj 101 82 - 32;
#X obj 58 64 moses 47.5;
```

```
    #X obj 106 589 *~ 15;
    #X obj 58 82 mod 16;
490 #X obj 4 7 inlet;
    #X obj 199 495 route bassfx;
    #X obj 199 516 vline~;
    #X obj 109 639 *~;
    #X obj 109 660 outlet~;
495 #X connect 0 0 69 0;
    #X connect 1 0 2 0;
    #X connect 2 1 3 0;
    #X connect 2 1 78 0;
    #X connect 3 0 4 0;
500 #X connect 4 0 7 0;
    #X connect 5 0 10 0;
    #X connect 6 0 8 1;
    #X connect 7 0 5 0;
    #X connect 7 1 8 0;
505 #X connect 7 2 6 0;
    #X connect 8 0 9 0;
    #X connect 9 0 5 1;
    #X connect 10 0 11 0;
    #X connect 11 0 12 0;
510 #X connect 11 0 77 0;
    #X connect 12 0 13 0;
    #X connect 12 0 17 0;
    #X connect 12 0 39 0;
    #X connect 12 0 50 0;
515 #X connect 12 0 63 0;
    #X connect 12 0 64 0;
    #X connect 13 0 14 0;
    #X connect 14 0 68 0;
    #X connect 14 0 66 0;
520 #X connect 16 0 57 0;
    #X connect 17 0 16 0;
    #X connect 18 0 21 0;
    #X connect 19 0 30 0;
    #X connect 20 0 40 0;
525 #X connect 21 0 23 0;
    #X connect 21 1 22 0;
    #X connect 22 0 25 1;
    #X connect 23 0 24 0;
    #X connect 24 0 25 0;
530 #X connect 25 0 60 0;
    #X connect 26 0 27 0;
    #X connect 26 0 27 1;
    #X connect 27 0 28 0;
    #X connect 28 0 54 1;
535 #X connect 29 0 54 0;
    #X connect 30 0 32 0;
    #X connect 30 1 31 0;
    #X connect 31 0 34 1;
    #X connect 32 0 33 0;
540 #X connect 33 0 34 0;
    #X connect 34 0 59 0;
    #X connect 35 0 36 0;
    #X connect 35 0 36 1;
    #X connect 36 0 37 0;
```

```
#X connect 37 0 53 1;
#X connect 38 0 53 0;
#X connect 39 0 38 0;
#X connect 40 0 42 0;
#X connect 40 1 41 0;
#X connect 41 0 44 1;
#X connect 42 0 43 0;
#X connect 43 0 44 0;
#X connect 44 0 58 0;
#X connect 45 0 46 0;
#X connect 45 0 46 1;
#X connect 46 0 47 0;
#X connect 47 0 49 1;
#X connect 48 0 49 0;
#X connect 49 0 52 0;
#X connect 50 0 48 0;
#X connect 51 0 45 0;
#X connect 52 0 13 0;
#X connect 53 0 61 0;
#X connect 54 0 62 0;
#X connect 55 0 35 0;
#X connect 56 0 26 0;
#X connect 57 0 13 0;
#X connect 58 0 51 0;
#X connect 59 0 55 0;
#X connect 60 0 56 0;
#X connect 61 0 13 0;
#X connect 62 0 13 0;
#X connect 63 0 29 0;
#X connect 64 0 65 0;
#X connect 65 0 76 0;
#X connect 66 0 15 0;
#X connect 66 0 90 0;
#X connect 67 0 66 0;
#X connect 68 0 75 0;
#X connect 69 0 82 0;
#X connect 70 0 79 0;
#X connect 71 0 72 0;
#X connect 72 0 73 0;
#X connect 72 0 73 1;
#X connect 73 0 74 0;
#X connect 74 0 68 1;
#X connect 75 0 85 0;
#X connect 76 0 66 0;
#X connect 77 0 75 1;
#X connect 78 0 70 0;
#X connect 78 1 80 0;
#X connect 79 0 71 0;
#X connect 80 0 81 0;
#X connect 81 0 79 1;
#X connect 82 0 84 0;
#X connect 83 0 1 0;
#X connect 84 0 86 0;
#X connect 84 1 83 0;
#X connect 85 0 67 0;
#X connect 86 0 1 0;
#X connect 87 0 88 0;
```

```
#X connect 88 0 89 0;
#X connect 89 0 90 1;
#X connect 90 0 91 0;
#X restore 232 247 pd \$0-bassist;
#X obj 110 369 dac~;
#N canvas 485 235 520 300 \$0-drummer 0;
#X obj 22 19 inlet;
#X obj 22 40 t f f f f;
#N canvas 906 58 432 362 \$0-kick 0;
#X obj 16 18 inlet;
#X obj 16 39 mod 4;
#X obj 16 60 sel 0;
#X obj 16 102 vline~;
#X obj 16 123 *~;
#X obj 16 144 *~;
#X obj 16 186 -~ 0.25;
#X obj 16 207 cos~;
#X obj 16 296 outlet~;
#X msg 16 81 1 \, 0 150;
#X obj 16 165 *~ 10;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 2 0 9 0;
#X connect 3 0 4 0;
#X connect 3 0 4 1;
#X connect 3 0 5 1;
#X connect 4 0 5 0;
#X connect 5 0 10 0;
#X connect 6 0 7 0;
#X connect 7 0 8 0;
#X connect 9 0 3 0;
#X connect 10 0 6 0;
#X restore 22 113 pd \$0-kick;
#X obj 22 164 outlet~;
#N canvas 906 139 446 470 \$0-hihat 0;
#X obj 15 15 inlet;
#X obj 15 36 mod 8;
#X obj 15 57 t f f;
#X obj 15 78 mod 4;
#X obj 15 99 sel 2;
#X obj 15 141 > 0;
#X obj 86 98 b;
#X obj 86 140 == 0;
#X obj 31 168 sel 0 1;
#X obj 32 231 v \$0-tempo;
#X obj 32 252 / 4;
#X msg 32 273 1 \, 0 \$1;
#X obj 32 294 vline~;
#X obj 32 315 *~;
#X obj 32 336 *~;
#X obj 31 379 *~;
#X obj 255 248 noise~;
#X obj 31 400 outlet~;
#X msg 102 276 1 \, 0 \$1;
#X obj 102 297 vline~;
#X obj 102 318 *~;
#X obj 102 231 v \$0-tempo;
```

```
#X obj 32 355 lop~ 50;
#X obj 180 342 hip~ 4000;
#X obj 91 379 *~;
#X obj 91 400 outlet~;
#X obj 252 345 hip~ 4000;
#X obj 265 268 noise~;
#X obj 275 288 noise~;
#X obj 285 308 noise~;
#X obj 86 119 random 32;
#X obj 15 120 random 32;
#X obj 31 202 t b b;
#X obj 69 206 random 16;
#X obj 60 251 + 1;
#X obj 134 206 t b b;
#X obj 102 255 *;
#X obj 174 232 random 16;
#X obj 174 253 / 8;
#X obj 180 362 hip~ 4000;
#X obj 252 365 hip~ 4000;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 4 0 31 0;
#X connect 4 1 6 0;
#X connect 5 0 8 0;
#X connect 6 0 30 0;
#X connect 7 0 8 0;
#X connect 8 0 32 0;
#X connect 8 1 35 0;
#X connect 9 0 10 0;
#X connect 10 0 11 0;
#X connect 11 0 12 0;
#X connect 12 0 13 0;
#X connect 12 0 13 1;
#X connect 13 0 14 0;
#X connect 13 0 14 1;
#X connect 14 0 22 0;
#X connect 15 0 17 0;
#X connect 16 0 23 0;
#X connect 16 0 26 0;
#X connect 18 0 19 0;
#X connect 19 0 20 0;
#X connect 19 0 20 1;
#X connect 20 0 22 0;
#X connect 21 0 36 0;
#X connect 22 0 15 0;
#X connect 22 0 24 0;
#X connect 23 0 39 0;
#X connect 24 0 25 0;
#X connect 26 0 40 0;
#X connect 27 0 23 0;
#X connect 27 0 26 0;
#X connect 28 0 23 0;
#X connect 29 0 26 0;
#X connect 30 0 7 0;
#X connect 31 0 5 0;
```

```
#X connect 32 0 9 0;
#X connect 32 1 33 0;
#X connect 33 0 34 0;
#X connect 34 0 10 1;
#X connect 35 0 21 0;
#X connect 35 1 37 0;
#X connect 36 0 18 0;
#X connect 37 0 38 0;
#X connect 38 0 36 1;
#X connect 39 0 15 1;
#X connect 40 0 24 1;
#X restore 385 111 pd \$0-hihat;
#X obj 385 162 outlet~;
#X obj 445 162 outlet~;
#N canvas 273 85 1066 589 \$0-snare 0;
#X obj 9 4 inlet;
#X obj 44 171 noise~;
#X obj 179 218 vline~;
#X obj 178 242 *~;
#X obj 178 262 *~;
#X obj 48 310 *~;
#X obj 97 212 vline~;
#X obj 47 258 vcf~ 2.5;
#X obj 103 231 vline~;
#X obj 53 277 vcf~ 2.5;
#X obj 54 191 noise~;
#X obj 79 311 *~;
#X obj 209 238 vline~;
#X obj 208 262 *~;
#X obj 208 282 *~;
#X obj 104 120 t f f f f;
#X obj 78 145 * 1000;
#X msg 212 169 1 1 \, 0 \$1 1;
#X msg 233 192 1 1 \, 0 \$1 1;
#X obj 219 140 * 500;
#X obj 179 140 * 600;
#X obj 128 145 * 800;
#X msg 97 171 1500 1 \, 300 \$1 1;
#X msg 103 190 2500 1 \, 100 \$1 1;
#X obj 57 332 +~;
#X obj 472 172 hilbert~;
#X obj 466 210 complex-mod~;
#X obj 544 188 sig~ 175;
#X obj 467 93 phasor~ 111;
#X obj 557 209 complex-mod~;
#X obj 635 186 sig~ 224;
#X obj 313 211 osc~ 330;
#X obj 404 211 osc~ 180;
#X obj 588 323 *~;
#X obj 473 322 *~;
#X obj 408 321 *~;
#X obj 332 257 vline~;
#X obj 316 319 *~;
#X obj 331 279 *~;
#X obj 332 299 *~;
#X obj 425 257 vline~;
#X obj 424 279 *~;
```

```
#X obj 425 299 *~;
#X obj 512 257 vline~;
#X obj 511 279 *~;
#X obj 512 299 *~;
#X obj 595 257 vline~;
#X obj 594 279 *~;
#X obj 595 299 *~;
#X msg 332 236 1 1 \, 0 \$1 1;
#X msg 425 236 1 1 \, 0 \$1 1;
#X msg 512 236 1 1 \, 0 \$1 1;
#X msg 595 236 1 1 \, 0 \$1 1;
#X msg 521 144 bang;
#X obj 304 139 * 500;
#X obj 344 141 * 800;
#X obj 384 139 * 1000;
#X obj 401 117 * 1600;
#X obj 246 550 outlet~;
#X obj 410 549 outlet~;
#X obj 467 119 expr~ if($v1<0.5 \, $v1-0.5 \, 0.5-$v1);
#X obj 714 181 noise~;
#X obj 849 228 vline~;
#X obj 848 252 *~;
#X obj 848 272 *~;
#X obj 718 320 *~;
#X obj 767 222 vline~;
#X obj 717 268 vcf~ 2.5;
#X obj 773 241 vline~;
#X obj 723 287 vcf~ 2.5;
#X obj 724 201 noise~;
#X obj 749 321 *~;
#X obj 879 248 vline~;
#X obj 878 272 *~;
#X obj 878 292 *~;
#X obj 787 111 t f f f f;
#X obj 758 155 * 1000;
#X msg 882 179 1 1 \, 0 \$1 1;
#X msg 903 202 1 1 \, 0 \$1 1;
#X obj 899 150 * 500;
#X obj 859 150 * 600;
#X obj 808 155 * 800;
#X msg 767 181 1500 1 \, 300 \$1 1;
#X msg 773 200 2500 1 \, 100 \$1 1;
#X obj 727 342 +~;
#X obj 306 94 t f f f f b f;
#X obj 384 192 + 180;
#X obj 325 191 + 330;
#X obj 362 162 * 100;
#X obj 246 476 expr~ tanh($v2*5+4*$v1) \; tanh($v2*5+4*$v3);
#X obj 102 103 / 200;
#X obj 8 30 mod 8;
#X obj 8 50 sel 4;
#X obj 8 72 random 50;
#X obj 8 93 + 50;
#X obj 87 7 b;
#X obj 87 28 random 4;
#X obj 87 49 sel 0;
#X obj 87 70 random 30;
```

```
#X obj 87 88 + 10;
#X obj 520 404 *~ 3;
#X obj 117 389 *~ 3;
#X obj 431 399 *~ 1;
#X connect 0 0 91 0;
#X connect 1 0 7 0;
#X connect 2 0 3 0;
#X connect 2 0 3 1;
#X connect 3 0 4 0;
#X connect 3 0 4 1;
#X connect 4 0 5 1;
#X connect 5 0 24 0;
#X connect 6 0 7 1;
#X connect 7 0 5 0;
#X connect 8 0 9 1;
#X connect 9 0 11 0;
#X connect 10 0 9 0;
#X connect 11 0 24 1;
#X connect 12 0 13 0;
#X connect 12 0 13 1;
#X connect 13 0 14 0;
#X connect 13 0 14 1;
#X connect 14 0 11 1;
#X connect 15 0 16 0;
#X connect 15 1 21 0;
#X connect 15 2 20 0;
#X connect 15 3 19 0;
#X connect 16 0 22 0;
#X connect 17 0 2 0;
#X connect 18 0 12 0;
#X connect 19 0 18 0;
#X connect 20 0 17 0;
#X connect 21 0 23 0;
#X connect 22 0 6 0;
#X connect 23 0 8 0;
#X connect 24 0 101 0;
#X connect 25 0 26 0;
#X connect 25 0 29 0;
#X connect 25 1 26 1;
#X connect 25 1 29 1;
#X connect 26 0 34 0;
#X connect 27 0 26 2;
#X connect 28 0 60 0;
#X connect 29 0 33 0;
#X connect 30 0 29 2;
#X connect 31 0 37 0;
#X connect 32 0 35 0;
#X connect 33 0 102 0;
#X connect 34 0 102 0;
#X connect 35 0 102 0;
#X connect 36 0 38 0;
#X connect 36 0 38 1;
#X connect 37 0 102 0;
#X connect 38 0 39 0;
#X connect 38 0 39 1;
#X connect 39 0 37 1;
#X connect 40 0 41 0;
```

```
#X connect 40 0 41 1;
#X connect 41 0 42 0;
#X connect 41 0 42 1;
#X connect 42 0 35 1;
#X connect 43 0 44 0;
#X connect 43 0 44 1;
#X connect 44 0 45 0;
#X connect 44 0 45 1;
#X connect 45 0 34 1;
#X connect 46 0 47 0;
#X connect 46 0 47 1;
#X connect 47 0 48 0;
#X connect 47 0 48 1;
#X connect 48 0 33 1;
#X connect 49 0 36 0;
#X connect 50 0 40 0;
#X connect 51 0 43 0;
#X connect 52 0 46 0;
#X connect 53 0 25 1;
#X connect 54 0 49 0;
#X connect 55 0 50 0;
#X connect 56 0 51 0;
#X connect 57 0 52 0;
#X connect 60 0 25 0;
#X connect 61 0 67 0;
#X connect 62 0 63 0;
#X connect 62 0 63 1;
#X connect 63 0 64 0;
#X connect 63 0 64 1;
#X connect 64 0 65 1;
#X connect 65 0 84 0;
#X connect 66 0 67 1;
#X connect 67 0 65 0;
#X connect 68 0 69 1;
#X connect 69 0 71 0;
#X connect 70 0 69 0;
#X connect 71 0 84 1;
#X connect 72 0 73 0;
#X connect 72 0 73 1;
#X connect 73 0 74 0;
#X connect 73 0 74 1;
#X connect 74 0 71 1;
#X connect 75 0 76 0;
#X connect 75 1 81 0;
#X connect 75 2 80 0;
#X connect 75 3 79 0;
#X connect 76 0 82 0;
#X connect 77 0 62 0;
#X connect 78 0 72 0;
#X connect 79 0 78 0;
#X connect 80 0 77 0;
#X connect 81 0 83 0;
#X connect 82 0 66 0;
#X connect 83 0 68 0;
#X connect 84 0 100 0;
#X connect 85 0 54 0;
#X connect 85 1 55 0;
```

```
#X connect 85 2 56 0;
#X connect 85 3 57 0;
#X connect 85 4 53 0;
#X connect 85 5 88 0;
#X connect 86 0 32 0;
#X connect 87 0 31 0;
#X connect 88 0 87 0;
#X connect 88 0 86 0;
#X connect 89 0 58 0;
#X connect 89 1 59 0;
#X connect 90 0 15 0;
#X connect 90 0 75 0;
#X connect 90 0 85 0;
#X connect 91 0 92 0;
#X connect 92 0 93 0;
#X connect 92 1 95 0;
#X connect 93 0 94 0;
#X connect 94 0 90 0;
#X connect 95 0 96 0;
#X connect 96 0 97 0;
#X connect 97 0 98 0;
#X connect 98 0 99 0;
#X connect 99 0 90 0;
#X connect 100 0 89 2;
#X connect 101 0 89 0;
#X connect 102 0 89 1;
#X restore 135 112 pd \$0-snare;
#X obj 135 165 outlet~;
#X obj 205 165 outlet~;
#N canvas 365 112 975 620 \$0-clap 0;
#X obj 694 70 noise~;
#X obj 400 501 *~;
#X obj 430 466 *~;
#X obj 634 317 *~ 0.8;
#X obj 479 497 *~ 0.2;
#X obj 414 215 del 30;
#X obj 439 247 del 20;
#X obj 456 282 del 15;
#X obj 475 320 del 10;
#X obj 530 284 *~ 0.1;
#X obj 584 254 bp~ 1300 10;
#X obj 752 254 bp~ 700 10;
#X obj 674 254 bp~ 2500 4;
#X obj 408 531 bp~ 2700 2;
#X obj 645 115 hip~ 300;
#X obj 259 384 *~;
#X obj 260 335 vline~;
#X obj 260 359 *~;
#X obj 350 381 *~;
#X obj 351 332 vline~;
#X obj 351 356 *~;
#X obj 354 286 bang;
#X obj 502 254 lop~ 10000;
#X obj 360 132 t b f;
#X obj 276 158 * 100;
#X obj 328 157 * 13;
#X obj 275 181 + 1000;
```

```
#X obj 328 181 + 1000;
#X obj 414 159 * 25;
#X obj 495 156 * 7;
#X obj 495 180 + 100;
#X obj 413 182 + 800;
#X obj 361 110 + 100;
#X obj 61 50 noise~;
#X obj 198 312 *~ 0.8;
#X obj 94 279 *~ 0.1;
#X obj 112 250 bp~ 1300 10;
#X obj 280 250 bp~ 700 10;
#X obj 202 250 bp~ 2500 4;
#X obj 209 110 hip~ 300;
#X obj 30 250 lop~ 10000;
#X obj 196 503 *~;
#X obj 221 454 *~;
#X obj 275 499 *~ 0.2;
#X obj 204 533 bp~ 2700 2;
#X obj 417 55 noise~;
#X obj 306 10 inlet;
#X obj 204 581 outlet~;
#X obj 204 554 expr~ tanh($v1);
#X obj 408 582 outlet~;
#X obj 408 555 expr~ tanh($v1);
#X msg 353 309 1.3 3 \, 0 100 3;
#X msg 252 308 1.3 1 \, 0 800 1;
#X obj 360 89 * 2;
#X obj 306 31 mod 8;
#X obj 306 52 sel 4;
#X obj 306 73 f 50;
#X connect 0 0 14 0;
#X connect 0 0 22 0;
#X connect 1 0 13 0;
#X connect 2 0 1 1;
#X connect 2 0 4 0;
#X connect 3 0 2 1;
#X connect 4 0 13 0;
#X connect 5 0 6 0;
#X connect 5 0 21 0;
#X connect 6 0 7 0;
#X connect 6 0 21 0;
#X connect 7 0 8 0;
#X connect 7 0 21 0;
#X connect 8 0 21 0;
#X connect 9 0 3 0;
#X connect 10 0 3 0;
#X connect 11 0 3 0;
#X connect 12 0 3 0;
#X connect 13 0 50 0;
#X connect 14 0 10 0;
#X connect 14 0 11 0;
#X connect 14 0 12 0;
#X connect 15 0 2 0;
#X connect 15 0 42 1;
#X connect 16 0 17 0;
#X connect 16 0 17 1;
#X connect 17 0 15 0;
```

```
#X connect 17 0 15 1;
#X connect 18 0 1 0;
#X connect 18 0 41 1;
#X connect 19 0 20 0;
#X connect 19 0 20 1;
#X connect 20 0 18 0;
#X connect 20 0 18 1;
#X connect 21 0 51 0;
#X connect 22 0 9 0;
#X connect 23 0 5 0;
#X connect 23 0 52 0;
#X connect 23 0 21 0;
#X connect 23 1 29 0;
#X connect 23 1 28 0;
#X connect 23 1 25 0;
#X connect 23 1 24 0;
#X connect 24 0 26 0;
#X connect 25 0 27 0;
#X connect 26 0 22 1;
#X connect 26 0 40 1;
#X connect 27 0 10 1;
#X connect 27 0 36 1;
#X connect 28 0 31 0;
#X connect 29 0 30 0;
#X connect 30 0 11 1;
#X connect 30 0 37 1;
#X connect 31 0 12 1;
#X connect 31 0 38 1;
#X connect 32 0 23 0;
#X connect 33 0 39 0;
#X connect 33 0 40 0;
#X connect 34 0 42 0;
#X connect 35 0 34 0;
#X connect 36 0 34 0;
#X connect 37 0 34 0;
#X connect 38 0 34 0;
#X connect 39 0 36 0;
#X connect 39 0 37 0;
#X connect 39 0 38 0;
#X connect 40 0 35 0;
#X connect 41 0 44 0;
#X connect 42 0 43 0;
#X connect 42 0 41 0;
#X connect 43 0 44 0;
#X connect 44 0 48 0;
#X connect 45 0 14 0;
#X connect 45 0 39 0;
#X connect 45 0 40 0;
#X connect 45 0 22 0;
#X connect 46 0 54 0;
#X connect 48 0 47 0;
#X connect 50 0 49 0;
#X connect 51 0 19 0;
#X connect 52 0 16 0;
#X connect 53 0 32 0;
#X connect 54 0 55 0;
#X connect 55 0 56 0;
```

```
#X connect 56 0 53 0;
#X restore 250 112 pd \$0-clap;
#X obj 261 164 outlet~;
#X obj 331 164 outlet~;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 1 1 7 0;
#X connect 1 2 10 0;
#X connect 1 3 4 0;
#X connect 2 0 3 0;
#X connect 4 0 5 0;
#X connect 4 1 6 0;
#X connect 7 0 8 0;
#X connect 7 1 9 0;
#X connect 10 0 11 0;
#X connect 10 1 12 0;
#X restore 69 308 pd \$0-drummer;
#N canvas 485 147 450 300 \$0-accentuate 0;
#X obj 18 14 inlet;
#X obj 18 56 tabread \$0-accent;
#X obj 18 77 sel 0 1 2 3 4 5 6 7;
#X obj 18 98 outlet;
#X obj 25 119 outlet;
#X obj 33 142 outlet;
#X obj 45 167 outlet;
#X obj 68 98 outlet;
#X obj 75 119 outlet;
#X obj 83 142 outlet;
#X obj 95 167 outlet;
#X obj 18 35 mod 32;
#X connect 0 0 11 0;
#X connect 1 0 2 0;
#X connect 2 0 3 0;
#X connect 2 1 4 0;
#X connect 2 2 5 0;
#X connect 2 3 6 0;
#X connect 2 4 7 0;
#X connect 2 5 8 0;
#X connect 2 6 9 0;
#X connect 2 7 10 0;
#X connect 11 0 1 0;
#X restore 212 170 pd \$0-accentuate;
#N canvas 913 58 450 406 \$0-dubpad 0;
#X obj 342 26 inlet~;
#X obj 24 29 inlet;
#X obj 16 383 delwrite~ \$0-dubpad-l 10000;
#X obj 204 384 delwrite~ \$0-dubpad-r 10000;
#X obj 203 228 vd~ \$0-dubpad-r;
#X obj 15 231 vd~ \$0-dubpad-l;
#X obj 54 355 outlet~;
#X obj 140 357 outlet~;
#X obj 24 53 t b b b;
#X obj 22 110 v \$0-dubpad-l-del;
#X obj 46 91 v \$0-dubpad-r-del;
#X obj 16 176 *;
#X obj 63 72 v \$0-tempo;
#X obj 16 197 sig~;
```

```
#X obj 204 178 *;
#X obj 204 199 sig~;
#X obj 15 324 expr~ tanh($v1);
#X obj 203 325 expr~ tanh($v1);
#X obj 203 274 lop~ 3000;
#X obj 15 273 lop~ 3000;
#X obj 203 253 hip~ 300;
#X obj 15 252 hip~ 300;
#X obj 229 25 inlet;
#X obj 229 46 v \$0-tempo;
#X msg 235 140 1 \, 0 \$1;
#X obj 235 161 vline~;
#X obj 235 182 *~;
#X obj 235 203 *~;
#X obj 159 25 inlet;
#X obj 159 46 v \$0-tempo;
#X msg 51 149 1 \, 0 \$1;
#X obj 51 170 vline~;
#X obj 51 191 *~;
#X obj 51 212 *~;
#X obj 181 299 *~ 0.25;
#X obj 65 299 *~ 0.25;
#X obj 111 150 phasor~;
#X obj 111 171 -~ 0.25;
#X obj 111 192 cos~;
#X obj 151 192 cos~;
#X obj 158 115 /;
#X obj 158 91 swap 1000;
#X obj 158 72 * 8;
#X obj 111 213 *~ 2;
#X obj 151 213 *~ 2;
#X obj 235 120 * 2;
#X obj 51 128 * 2;
#X obj 2 8 inlet;
#X obj 329 208 route dubfb;
#X obj 329 229 vline~;
#X obj 231 299 *~;
#X obj 14 298 *~;
#X obj 329 250 *~ 0.85;
#X connect 0 0 27 1;
#X connect 0 0 33 1;
#X connect 1 0 8 0;
#X connect 4 0 20 0;
#X connect 5 0 21 0;
#X connect 8 0 9 0;
#X connect 8 1 10 0;
#X connect 8 2 12 0;
#X connect 9 0 11 0;
#X connect 10 0 14 0;
#X connect 11 0 13 0;
#X connect 12 0 11 1;
#X connect 12 0 14 1;
#X connect 12 0 42 0;
#X connect 13 0 5 0;
#X connect 14 0 15 0;
#X connect 15 0 4 0;
#X connect 16 0 2 0;
```

```
#X connect 16 0 6 0;
#X connect 17 0 3 0;
#X connect 17 0 7 0;
#X connect 18 0 34 0;
#X connect 18 0 50 0;
#X connect 19 0 35 0;
#X connect 19 0 51 0;
#X connect 20 0 18 0;
#X connect 21 0 19 0;
#X connect 22 0 23 0;
#X connect 23 0 45 0;
#X connect 24 0 25 0;
#X connect 25 0 26 0;
#X connect 25 0 26 1;
#X connect 26 0 27 0;
#X connect 27 0 20 0;
#X connect 28 0 29 0;
#X connect 29 0 46 0;
#X connect 30 0 31 0;
#X connect 31 0 32 0;
#X connect 31 0 32 1;
#X connect 32 0 33 0;
#X connect 33 0 21 0;
#X connect 34 0 16 0;
#X connect 35 0 17 0;
#X connect 36 0 37 0;
#X connect 36 0 39 0;
#X connect 37 0 38 0;
#X connect 38 0 43 0;
#X connect 39 0 44 0;
#X connect 40 0 36 0;
#X connect 41 0 40 0;
#X connect 41 1 40 1;
#X connect 42 0 41 0;
#X connect 43 0 5 0;
#X connect 44 0 4 0;
#X connect 45 0 24 0;
#X connect 46 0 30 0;
#X connect 47 0 48 0;
#X connect 48 0 49 0;
#X connect 49 0 52 0;
#X connect 50 0 17 0;
#X connect 51 0 16 0;
#X connect 52 0 50 1;
#X connect 52 0 51 1;
#X restore 260 302 pd \$0-dubpad;
#X obj 179 85 t b b;
#N canvas 485 90 450 567 \$0-trichords 0;
#X obj 22 14 inlet;
#X obj 22 35 + 32;
#X obj 22 56 mod 64;
#X obj 22 77 moses 47.5;
#X obj 22 98 mod 16;
#X obj 80 98 - 32;
#X obj 22 127 tabread \$0-triline;
#X obj 22 148 sel -1;
#X obj 70 149 tabread \$0-scale;
```

```
#X obj 70 190 + 12;
#X obj 70 211 mtof;
#X obj 70 232 vline~;
#X obj 70 274 phasor~;
#X obj 70 335 expr~ if($v1<$v2 \, $v1/$v2 \, (1-$v1)/(1-$v2));
#X obj 325 229 vline~;
#X obj 325 274 clip~ 0.001 0.999;
#X msg 325 208 0 \, 0.707 \$1;
#X obj 326 253 *~;
#X obj 80 355 expr~ if($v1<$v2 \, $v1/$v2 \, (1-$v1)/(1-$v2));
#X obj 90 375 expr~ if($v1<$v2 \, $v1/$v2 \, (1-$v1)/(1-$v2));
#X obj 80 294 phasor~;
#X obj 90 314 phasor~;
#X obj 120 211 + 1;
#X obj 190 194 v \$0-tempo;
#X obj 120 232 *;
#X obj 69 469 -~ 0.25;
#X obj 69 490 cos~;
#X obj 69 422 hip~ 5;
#X obj 69 511 outlet~;
#X obj 69 445 *~;
#X msg 151 293 1 \, 0 \$1;
#X obj 151 314 vline~;
#X obj 120 190 random 8;
#X obj 69 169 t f b b;
#X obj 129 469 -~ 0.25;
#X obj 129 490 cos~;
#X obj 129 511 outlet~;
#X obj 129 445 *~;
#X obj 200 251 + 1;
#X obj 200 272 *;
#X obj 200 230 random 8;
#X msg 205 293 1 \, 0 \$1;
#X obj 205 314 vline~;
#X obj 227 13 inlet;
#X obj 227 105 v \$0-tempo;
#X msg 227 147 1 \, 0 \$1;
#X obj 227 168 vline~;
#X obj 70 253 lop~ 8;
#X obj 163 254 -~ 3;
#X obj 124 253 +~ 3;
#X obj 325 187 * 4;
#X connect 0 0 1 0;
#X connect 1 0 2 0;
#X connect 2 0 3 0;
#X connect 3 0 4 0;
#X connect 3 1 5 0;
#X connect 4 0 6 0;
#X connect 5 0 6 0;
#X connect 6 0 7 0;
#X connect 7 1 8 0;
#X connect 8 0 33 0;
#X connect 9 0 10 0;
#X connect 10 0 11 0;
#X connect 11 0 47 0;
#X connect 12 0 13 0;
#X connect 13 0 27 0;
```

```
#X connect 14 0 17 0;
#X connect 14 0 17 1;
#X connect 15 0 13 1;
#X connect 15 0 18 1;
#X connect 15 0 19 1;
#X connect 16 0 14 0;
#X connect 17 0 15 0;
#X connect 18 0 27 0;
#X connect 19 0 27 0;
#X connect 20 0 18 0;
#X connect 21 0 19 0;
#X connect 22 0 24 0;
#X connect 23 0 24 1;
#X connect 23 0 39 1;
#X connect 23 0 50 0;
#X connect 24 0 30 0;
#X connect 25 0 26 0;
#X connect 26 0 28 0;
#X connect 27 0 29 0;
#X connect 27 0 37 0;
#X connect 29 0 25 0;
#X connect 30 0 31 0;
#X connect 31 0 29 1;
#X connect 32 0 22 0;
#X connect 33 0 9 0;
#X connect 33 1 32 0;
#X connect 33 1 40 0;
#X connect 33 2 23 0;
#X connect 34 0 35 0;
#X connect 35 0 36 0;
#X connect 37 0 34 0;
#X connect 38 0 39 0;
#X connect 39 0 41 0;
#X connect 40 0 38 0;
#X connect 41 0 42 0;
#X connect 42 0 37 1;
#X connect 43 0 44 0;
#X connect 44 0 45 0;
#X connect 45 0 46 0;
#X connect 46 0 29 1;
#X connect 46 0 37 1;
#X connect 47 0 12 0;
#X connect 47 0 48 0;
#X connect 47 0 49 0;
#X connect 48 0 21 0;
#X connect 49 0 20 0;
#X connect 50 0 16 0;
#X restore 321 275 pd \$0-trichords;
#N canvas 485 124 450 587 \$0-syncer 0;
#X obj 15 42 inlet;
#X obj 15 84 mod 64;
#X obj 15 105 moses 47.5;
#X obj 73 126 - 32;
#X obj 15 176 sel -1;
#X obj 18 226 tabread \$0-scale;
#X obj 18 288 mtof;
#X obj 18 309 vline~;
```

```
1400  #X obj 18 351 phasor~;
      #X obj 224 377 + 1;
      #X obj 271 316 v \$0-tempo;
      #X obj 224 398 *;
      #X obj 62 450 hip~ 5;
1405  #X obj 62 539 outlet~;
      #X obj 62 473 *~;
      #X msg 231 420 1 \, 0 \$1;
      #X obj 231 441 vline~;
      #X obj 17 246 t f b b;
1410  #X obj 164 540 outlet~;
      #X obj 165 478 *~;
      #X obj 280 378 + 1;
      #X obj 280 399 *;
      #X msg 285 420 1 \, 0 \$1;
1415  #X obj 285 441 vline~;
      #X obj 220 41 inlet;
      #X obj 220 133 v \$0-tempo;
      #X obj 220 154 * 8;
      #X obj 220 196 vline~;
1420  #X obj 220 73 t b b;
      #X obj 261 72 random 4;
      #X obj 261 93 + 4;
      #X obj 15 63 + 16;
      #X obj 59 381 *~;
1425  #X obj 61 404 wrap~;
      #X obj 118 374 +~ 1;
      #X obj 118 334 vline~;
      #X obj 118 353 *~;
      #X obj 15 155 tabread \$0-syncline;
1430  #X obj 18 203 mod 5;
      #X obj 123 179 div 5;
      #X obj 162 249 *;
      #X obj 123 199 + 1;
      #X obj 178 229 v \$0-tempo;
1435  #X obj 61 517 expr~ tanh($v1);
      #X obj 164 519 expr~ tanh($v1);
      #X obj 117 295 pack f f;
      #X msg 117 316 \$1 \, 0 \$2;
      #X obj 123 226 t f f b;
1440  #X obj 117 252 sqrt;
      #X obj 61 427 *~ 16;
      #X obj 18 330 lop~ 25;
      #X obj 160 273 / 3;
      #X msg 220 175 2 \, 0 \$1;
1445  #X obj 280 357 random 4;
      #X obj 224 356 random 4;
      #X obj 15 126 mod 16;
      #X connect 0 0 31 0;
      #X connect 1 0 2 0;
1450  #X connect 2 0 55 0;
      #X connect 2 1 3 0;
      #X connect 3 0 37 0;
      #X connect 4 1 38 0;
      #X connect 4 1 39 0;
1455  #X connect 5 0 17 0;
      #X connect 6 0 7 0;
```

```
#X connect 7 0 50 0;
#X connect 8 0 32 0;
#X connect 9 0 11 0;
#X connect 10 0 11 1;
#X connect 10 0 21 1;
#X connect 11 0 15 0;
#X connect 12 0 14 0;
#X connect 12 0 19 0;
#X connect 14 0 43 0;
#X connect 15 0 16 0;
#X connect 16 0 14 1;
#X connect 17 0 6 0;
#X connect 17 1 53 0;
#X connect 17 1 54 0;
#X connect 17 2 10 0;
#X connect 19 0 44 0;
#X connect 20 0 21 0;
#X connect 21 0 22 0;
#X connect 22 0 23 0;
#X connect 23 0 19 1;
#X connect 24 0 28 0;
#X connect 25 0 26 0;
#X connect 26 0 52 0;
#X connect 27 0 34 0;
#X connect 28 0 25 0;
#X connect 28 1 29 0;
#X connect 29 0 30 0;
#X connect 30 0 26 1;
#X connect 31 0 1 0;
#X connect 32 0 33 0;
#X connect 33 0 49 0;
#X connect 34 0 32 1;
#X connect 35 0 36 0;
#X connect 35 0 36 1;
#X connect 36 0 34 0;
#X connect 37 0 4 0;
#X connect 38 0 5 0;
#X connect 39 0 41 0;
#X connect 40 0 51 0;
#X connect 41 0 47 0;
#X connect 42 0 40 1;
#X connect 43 0 13 0;
#X connect 44 0 18 0;
#X connect 45 0 46 0;
#X connect 46 0 35 0;
#X connect 47 0 48 0;
#X connect 47 1 40 0;
#X connect 47 2 42 0;
#X connect 48 0 45 0;
#X connect 49 0 12 0;
#X connect 50 0 8 0;
#X connect 51 0 45 1;
#X connect 52 0 27 0;
#X connect 53 0 20 0;
#X connect 54 0 9 0;
#X connect 55 0 37 0;
#X restore 360 308 pd \$0-syncer;
```

```
#N canvas 485 58 878 707 \$0-sequencer 0;
#X obj 68 5 inlet;
#X obj 122 666 outlet;
#X obj 68 26 div 64;
#X obj 68 47 change;
#X obj 15 23 inlet;
#X obj 68 90 sel -1;
#X obj 68 69 - 1;
#X obj 68 158 sel 0;
#X obj 67 196 v \$0-tempo;
#X obj 67 217 * 128;
#X obj 147 163 sel 1;
#X obj 147 196 v \$0-tempo;
#X obj 147 217 * 128;
#X msg 147 259 clap 3 \$1;
#X obj 217 196 v \$0-tempo;
#X obj 217 217 * 128;
#X obj 217 163 sel 2;
#X msg 217 260 snare 2.5 \$1;
#X obj 307 163 sel 3;
#X msg 307 211 kick 0 \, clap 0;
#X obj 64 277 sel 4;
#X obj 64 297 v \$0-tempo;
#X obj 64 318 * 128;
#X obj 291 295 v \$0-tempo;
#X obj 291 316 * 128;
#X obj 291 275 sel 5;
#X msg 291 339 hihat 2 \$1;
#X obj 371 295 v \$0-tempo;
#X obj 371 316 * 128;
#X obj 371 275 sel 6;
#X msg 371 339 trichords 2 \$1;
#X obj 476 276 sel 7;
#X obj 481 295 v \$0-tempo;
#X obj 481 316 * 64;
#X msg 481 339 bass 0 \$1;
#X obj 62 369 sel 8;
#X obj 267 370 sel 9;
#X obj 268 392 v \$0-tempo;
#X obj 268 413 * 64;
#X obj 359 372 sel 10;
#X obj 358 392 v \$0-tempo;
#X obj 358 413 * 128;
#X obj 477 374 sel 11;
#X obj 477 395 v \$0-tempo;
#X obj 477 416 * 64;
#X msg 477 454 snare 2.5 \$1;
#X obj 13 464 sel 12;
#X obj 316 469 sel 16;
#X obj 319 495 v \$0-tempo;
#X obj 340 520 * 256;
#X msg 321 543 trichords 2 \, dubpad 6 \$1;
#X obj 405 477 sel 20;
#X msg 405 498 syncer 1;
#X obj 481 477 sel 24;
#X obj 52 571 v \$0-tempo;
#X msg 26 621 bass 0 \$1;
```

```
#X obj 52 550 sel 28;
#X obj 342 661 outlet;
#X msg 281 618 bassfx 0 \, dubfb 0 \$1;
#X obj 180 569 v \$0-tempo;
#X obj 179 550 sel 31;
#X obj 101 108 mod 32;
#X obj 6 662 outlet;
#X obj 67 177 t b b;
#X obj 27 600 * 192;
#X obj 180 589 * 256;
#X msg 25 258 bassfx 1 \, dubfb 1;
#X msg 166 91 dubfb 1;
#X msg 64 341 kick 8 \, clap 3 \, bass 3 \, syncer 1 \$1;
#X msg 359 434 kick 8 \, clap 3 \, hihat 0 \, bass 3 \$1;
#X obj 484 504 v \$0-tempo;
#X obj 484 525 * 256;
#X obj 63 401 v \$0-tempo;
#X obj 63 422 * 256;
#X msg 269 432 hihat 2 \$1;
#X msg 482 551 breaks 1.5 \$1 \, kick 0 \, snare 0 \, clap 0 \, hihat
0 \, trichords 0 \, syncer 0;
#X msg 63 447 kick 0 \, clap 0 \, snare 0 \, hihat 0 \, breaks 1.5
\$1;
#X msg 67 237 master 0.9 \, kick 8 \, dubpad 6;
#X msg 15 127 kick 0 \, snare 0 \, clap 0 \, hihat 0 \, breaks 0 \,
bass 0 \, dubpad 0 \, trichords 0 \, syncer 0 \, master 0.9;
#X obj 14 483 v \$0-tempo;
#X obj 14 504 * 256;
#X obj 87 600 * 256;
#X msg 92 623 breaks 0 \$1;
#X msg 13 523 hihat 2 \, trichords 0 \, syncer 0 \, dubpad 0 \, breaks
0.1 \$1;
#X connect 0 0 2 0;
#X connect 2 0 3 0;
#X connect 3 0 6 0;
#X connect 4 0 78 0;
#X connect 4 0 67 0;
#X connect 5 0 78 0;
#X connect 5 0 67 0;
#X connect 5 1 61 0;
#X connect 6 0 5 0;
#X connect 7 0 63 0;
#X connect 7 1 10 0;
#X connect 8 0 9 0;
#X connect 9 0 77 0;
#X connect 10 0 11 0;
#X connect 10 1 16 0;
#X connect 11 0 12 0;
#X connect 12 0 13 0;
#X connect 13 0 1 0;
#X connect 14 0 15 0;
#X connect 15 0 17 0;
#X connect 16 0 14 0;
#X connect 16 1 18 0;
#X connect 17 0 1 0;
#X connect 18 0 19 0;
#X connect 18 1 20 0;
```

```
#X connect 19 0 1 0;
#X connect 20 0 21 0;
#X connect 20 1 25 0;
#X connect 21 0 22 0;
#X connect 22 0 68 0;
#X connect 23 0 24 0;
#X connect 24 0 26 0;
#X connect 25 0 23 0;
#X connect 25 1 29 0;
#X connect 26 0 1 0;
#X connect 27 0 28 0;
#X connect 28 0 30 0;
#X connect 29 0 27 0;
#X connect 29 1 31 0;
#X connect 30 0 1 0;
#X connect 31 0 32 0;
#X connect 31 1 35 0;
#X connect 32 0 33 0;
#X connect 33 0 34 0;
#X connect 34 0 1 0;
#X connect 35 0 72 0;
#X connect 35 1 36 0;
#X connect 36 0 37 0;
#X connect 36 1 39 0;
#X connect 37 0 38 0;
#X connect 38 0 74 0;
#X connect 39 0 40 0;
#X connect 39 1 42 0;
#X connect 40 0 41 0;
#X connect 41 0 69 0;
#X connect 42 0 43 0;
#X connect 42 1 46 0;
#X connect 43 0 44 0;
#X connect 44 0 45 0;
#X connect 45 0 1 0;
#X connect 46 0 79 0;
#X connect 46 1 47 0;
#X connect 47 0 48 0;
#X connect 47 1 51 0;
#X connect 48 0 49 0;
#X connect 49 0 50 0;
#X connect 50 0 1 0;
#X connect 51 0 52 0;
#X connect 51 1 53 0;
#X connect 52 0 1 0;
#X connect 53 0 70 0;
#X connect 53 1 56 0;
#X connect 54 0 64 0;
#X connect 54 0 81 0;
#X connect 55 0 1 0;
#X connect 56 0 54 0;
#X connect 56 1 60 0;
#X connect 58 0 57 0;
#X connect 59 0 65 0;
#X connect 60 0 59 0;
#X connect 61 0 7 0;
#X connect 63 0 8 0;
```

```
#X connect 63 0 66 0;
#X connect 63 1 62 0;
#X connect 63 1 78 0;
#X connect 64 0 55 0;
#X connect 65 0 58 0;
#X connect 66 0 57 0;
#X connect 67 0 57 0;
#X connect 68 0 1 0;
#X connect 69 0 1 0;
#X connect 70 0 71 0;
#X connect 71 0 75 0;
#X connect 72 0 73 0;
#X connect 73 0 76 0;
#X connect 74 0 1 0;
#X connect 75 0 1 0;
#X connect 76 0 1 0;
#X connect 77 0 1 0;
#X connect 78 0 1 0;
#X connect 79 0 80 0;
#X connect 80 0 83 0;
#X connect 81 0 82 0;
#X connect 82 0 1 0;
#X connect 83 0 1 0;
#X restore 12 187 pd \$0-sequencer;
#X obj 64 143 t f f f;
#X obj 101 83 t b b;
#X msg 279 87 \; pd dsp 1;
#X obj 278 66 delay 1000;
#X obj 269 123 delay 1000;
#N canvas 485 175 450 590 \$0-breaks 0;
#X obj 105 17 inlet;
#X obj 24 495 outlet~;
#X obj 123 498 outlet~;
#X obj 21 67 mod 2;
#X obj 21 88 sel 0;
#X obj 20 138 v \$0-tempo;
#X obj 20 159 * 2;
#X msg 20 180 0 \, 1 \$1;
#X obj 20 201 vline~;
#X obj 20 222 /~ 16;
#X obj 20 243 +~;
#X obj 20 264 wrap~;
#X obj 20 285 *~ 0;
#X obj 21 37 t f f;
#X obj 97 96 * 5;
#X obj 97 117 mod 16;
#X obj 97 75 mod 32;
#X obj 97 204 vline~;
#X obj 97 178 / 16;
#X obj 179 202 v \$0-breakbeat-len;
#X obj 21 115 t b b;
#X obj 33 331 tabread4~ \$0-breakbeat-l;
#X obj 133 351 tabread4~ \$0-breakbeat-r;
#X obj 80 263 +~;
#X obj 80 284 wrap~;
#X obj 80 305 *~ 0;
#X obj 25 462 expr~ tanh($v1);
```

```
#X obj 125 462 expr~ tanh($v1);
#X obj 23 371 tabread4~ \$0-breakbeat-r;
#X obj 123 391 tabread4~ \$0-breakbeat-l;
#X obj 80 242 /~ 8;
#X obj 126 413 *~ 32;
#X obj 26 413 *~ 32;
#X obj 64 15 inlet;
#X obj 64 36 route breaks;
#X obj 81 436 vline~;
#X obj 124 479 *~;
#X obj 24 480 *~;
#X obj 126 437 hip~ 100;
#X obj 24 437 hip~ 100;
#X connect 0 0 13 0;
#X connect 3 0 4 0;
#X connect 4 0 20 0;
#X connect 5 0 6 0;
#X connect 6 0 7 0;
#X connect 7 0 8 0;
#X connect 8 0 9 0;
#X connect 8 0 30 0;
#X connect 9 0 10 0;
#X connect 10 0 11 0;
#X connect 11 0 12 0;
#X connect 12 0 28 0;
#X connect 12 0 29 0;
#X connect 13 0 3 0;
#X connect 13 1 16 0;
#X connect 14 0 15 0;
#X connect 15 0 18 0;
#X connect 16 0 14 0;
#X connect 17 0 10 1;
#X connect 17 0 23 1;
#X connect 18 0 17 0;
#X connect 19 0 12 1;
#X connect 19 0 25 1;
#X connect 20 0 5 0;
#X connect 20 1 19 0;
#X connect 21 0 32 0;
#X connect 22 0 31 0;
#X connect 23 0 24 0;
#X connect 24 0 25 0;
#X connect 25 0 21 0;
#X connect 25 0 22 0;
#X connect 26 0 37 0;
#X connect 27 0 36 0;
#X connect 28 0 32 0;
#X connect 29 0 31 0;
#X connect 30 0 23 0;
#X connect 31 0 38 0;
#X connect 32 0 39 0;
#X connect 33 0 34 0;
#X connect 34 0 35 0;
#X connect 35 0 37 1;
#X connect 35 0 36 1;
#X connect 36 0 2 0;
#X connect 37 0 1 0;
```

```
#X connect 38 0 27 0;
#X connect 39 0 26 0;
#X restore 116 245 pd \$0-breaks;
#N canvas 485 204 450 300 \$0-flanger 0;
#X obj 22 16 inlet;
#X obj 83 14 inlet~;
#X obj 258 13 inlet~;
#X obj 80 241 delwrite~ \$0-flange-l 1000;
#X obj 243 234 delwrite~ \$0-flange-r 1000;
#X obj 95 174 vd~ \$0-flange-l;
#X obj 79 217 +~;
#X obj 245 211 +~;
#X obj 260 163 vd~ \$0-flange-r;
#X obj 159 125 vline~;
#X obj 158 48 mtof;
#X obj 158 85 swap 1000;
#X obj 158 106 /;
#X obj 19 44 mod 32;
#X obj 19 103 tabread \$0-flangeline;
#X obj 19 124 sel -1;
#X obj 158 29 tabread \$0-scale;
#X obj 99 264 outlet~;
#X obj 284 269 outlet~;
#X obj 157 146 lop~ 25;
#X obj 260 89 v \$0-tempo;
#X obj 284 132 vline~;
#X obj 260 186 *~;
#X obj 95 195 *~;
#X obj 88 49 div 16;
#X obj 88 70 + 1;
#X obj 20 71 t f f;
#X obj 159 67 *;
#X obj 262 66 bang;
#X msg 259 109 -0.95 \, -0.85 \$1;
#X connect 0 0 13 0;
#X connect 0 0 28 0;
#X connect 1 0 6 0;
#X connect 2 0 7 0;
#X connect 5 0 23 0;
#X connect 6 0 3 0;
#X connect 6 0 17 0;
#X connect 7 0 4 0;
#X connect 7 0 18 0;
#X connect 8 0 22 0;
#X connect 9 0 19 0;
#X connect 10 0 27 0;
#X connect 11 0 12 0;
#X connect 11 1 12 1;
#X connect 12 0 9 0;
#X connect 13 0 26 0;
#X connect 14 0 15 0;
#X connect 15 1 16 0;
#X connect 16 0 10 0;
#X connect 19 0 8 0;
#X connect 19 0 5 0;
#X connect 20 0 29 0;
#X connect 21 0 22 1;
```

```
#X connect 21 0 23 1;
#X connect 22 0 7 1;
#X connect 23 0 6 1;
#X connect 24 0 25 0;
#X connect 25 0 27 1;
#X connect 26 0 14 0;
#X connect 26 1 24 0;
#X connect 27 0 11 0;
#X connect 28 0 20 0;
#X connect 29 0 21 0;
#X restore 107 272 pd \$0-flanger;
#N canvas 3 78 628 610 \$0-output 0;
#X msg 151 538 \; pd quit;
#X obj 8 24 inlet;
#X obj 95 32 quit-on-close;
#X obj 289 28 table \$0-scale 5;
#X obj 288 50 table \$0-bassline 32;
#X obj 288 73 table \$0-accent 32;
#X obj 288 7 table \$0-triline 32;
#X obj 288 173 table \$0-syncline 32;
#X obj 290 108 table \$0-breakbeat-l;
#X obj 290 129 table \$0-breakbeat-r;
#X obj 289 215 table \$0-flangeline 32;
#X obj 142 461 writesf~ 2;
#X msg 127 394 stop;
#X obj 150 488 delay 1000;
#X obj 150 507 spigot;
#X obj 149 429 spigot;
#X obj 227 422 loadbang;
#X obj 227 443 v render;
#N canvas 0 50 679 421 \$0-cuesheet 0;
#X obj 92 17 inlet;
#X obj 188 15 inlet;
#X obj 15 15 inlet;
#X obj 188 75 f 0;
#X obj 224 74 + 1;
#X obj 279 14 loadbang;
#X msg 279 35 1000 75;
#X obj 279 55 /;
#X obj 188 54 metro 13.3333;
#X obj 188 96 t f f f f;
#X obj 239 125 mod 75;
#X obj 239 146 makefilename %02d;
#X obj 197 124 div 75;
#X obj 197 145 mod 60;
#X obj 197 166 makefilename %02d;
#X obj 142 124 div 4500;
#X obj 142 189 makefilename %02d;
#X obj 140 355 textfile;
#X obj 401 33 loadbang;
#X msg 230 287 clear \, rewind \, add PERFORMER "dynamo.pd" \, add
TITLE "dynamo.pd #\$1" \, add FILE "dynamo.pd.\$1.wav" WAVE;
#X obj 401 55 v seed;
#X obj 401 76 makefilename %02d;
#X obj 92 41 bang;
#X obj 188 36 bang;
#X obj 92 62 f 1;
```

```
#X obj 147 63 + 1;
#X obj 86 168 makefilename %02d;
#X msg 12 296 write dynamo.pd.\$1.cue cr;
#X obj 15 43 bang;
#X obj 13 251 symbol;
#X obj 29 348 outlet;
#X obj 23 140 print track;
#X obj 28 99 sel 16;
#X obj 418 135 makefilename %02d;
#X msg 419 112 1;
#X msg 62 273 add INDEX \$6 \$2:\$3:\$4;
#X obj 93 93 t f f;
#X obj 176 234 == 1;
#X obj 120 234 t a a a;
#X obj 141 254 spigot;
#X obj 119 214 pack s s s s s s s;
#X obj 418 185 makefilename %02d;
#X msg 419 162 0;
#X msg 141 315 add INDEX \$7 00:00:00;
#X msg 198 252 add TRACK \$1 AUDIO \, add FLAGS DCP \, add PERFORMER
"dynamo.pd" \, add TITLE "dynamo.pd #\$5/\$1";
#X connect 0 0 22 0;
#X connect 1 0 23 0;
#X connect 2 0 28 0;
#X connect 3 0 4 0;
#X connect 3 0 9 0;
#X connect 4 0 3 1;
#X connect 5 0 6 0;
#X connect 6 0 7 0;
#X connect 7 0 8 1;
#X connect 8 0 3 0;
#X connect 9 1 15 0;
#X connect 9 2 12 0;
#X connect 9 3 10 0;
#X connect 10 0 11 0;
#X connect 11 0 40 3;
#X connect 12 0 13 0;
#X connect 13 0 14 0;
#X connect 14 0 40 2;
#X connect 15 0 16 0;
#X connect 16 0 40 1;
#X connect 18 0 20 0;
#X connect 18 0 34 0;
#X connect 18 0 42 0;
#X connect 19 0 17 0;
#X connect 20 0 21 0;
#X connect 21 0 19 0;
#X connect 21 0 29 1;
#X connect 21 0 40 4;
#X connect 22 0 24 0;
#X connect 23 0 8 0;
#X connect 24 0 25 0;
#X connect 24 0 31 0;
#X connect 24 0 32 0;
#X connect 24 0 36 0;
#X connect 25 0 24 1;
#X connect 26 0 40 0;
```

```
#X connect 27 0 17 0;
#X connect 28 0 29 0;
#X connect 29 0 27 0;
#X connect 32 0 30 0;
#X connect 33 0 40 5;
#X connect 34 0 33 0;
#X connect 35 0 17 0;
#X connect 36 0 26 0;
#X connect 36 1 37 0;
#X connect 37 0 39 1;
#X connect 38 0 35 0;
#X connect 38 1 39 0;
#X connect 38 2 44 0;
#X connect 39 0 43 0;
#X connect 40 0 38 0;
#X connect 41 0 40 6;
#X connect 42 0 41 0;
#X connect 43 0 17 0;
#X connect 44 0 17 0;
#X restore 12 449 pd \$0-cuesheet;
#X obj 12 381 list prepend 0;
#X obj 14 402 route 0 1;
#X msg 11 479 1;
#X obj 39 423 t b b;
#X obj 272 342 v seed;
#X obj 272 363 makefilename %02d;
#X msg 272 385 open -bytes 2 dynamo.pd.\$1.wav \, start;
#X obj 7 424 bang;
#X obj 12 501 spigot;
#X obj 12 360 spigot;
#X obj 93 428 spigot;
#X obj 227 28 inlet;
#X obj 83 59 inlet~;
#X obj 156 70 inlet~;
#X obj 192 231 vu 15 120 empty empty -1 -8 0 10 -66577 -1 1 0;
#X obj 172 231 vu 15 120 empty empty -1 -8 0 10 -66577 -1 0 0;
#X obj 117 140 - 100;
#X obj 33 131 - 100;
#X obj 33 109 env~ 4096;
#X obj 117 118 env~ 4096;
#X obj 157 190 - 100;
#X obj 73 181 - 100;
#X obj 73 159 env~ 16384;
#X obj 157 168 env~ 16384;
#X obj 288 264 value \$0-tempo;
#X obj 288 290 value \$0-dubpad-l-del;
#X obj 288 311 value \$0-dubpad-r-del;
#X obj 289 239 value \$0-swing;
#X connect 1 0 28 0;
#X connect 12 0 15 0;
#X connect 13 0 14 0;
#X connect 14 0 0 0;
#X connect 15 0 11 0;
#X connect 16 0 17 0;
#X connect 17 0 15 1;
#X connect 17 0 14 1;
#X connect 17 0 27 1;
```

```
#X connect 17 0 28 1;
#X connect 17 0 29 1;
#X connect 18 0 21 0;
#X connect 19 0 20 0;
#X connect 20 0 26 0;
#X connect 20 1 22 0;
#X connect 21 0 27 0;
#X connect 22 0 18 0;
#X connect 22 1 13 0;
#X connect 22 1 12 0;
#X connect 23 0 24 0;
#X connect 24 0 25 0;
#X connect 25 0 15 0;
#X connect 26 0 18 1;
#X connect 27 0 19 1;
#X connect 28 0 19 0;
#X connect 29 0 18 2;
#X connect 30 0 23 0;
#X connect 30 0 29 0;
#X connect 31 0 11 0;
#X connect 31 0 37 0;
#X connect 31 0 41 0;
#X connect 32 0 11 1;
#X connect 32 0 38 0;
#X connect 32 0 42 0;
#X connect 35 0 33 0;
#X connect 36 0 34 0;
#X connect 37 0 36 0;
#X connect 38 0 35 0;
#X connect 39 0 33 1;
#X connect 40 0 34 1;
#X connect 41 0 40 0;
#X connect 42 0 39 0;
#X coords 0 -1 1 1 85 160 1 160 200;
#X restore 78 414 pd \$0-output;
#N canvas 200 275 1001 490 \$0-mixer 0;
#X obj 68 41 inlet~;
#X obj 486 45 inlet~;
#X obj 143 376 outlet~;
#X obj 224 375 outlet~;
#X obj 304 42 inlet~;
#X obj 349 43 inlet~;
#X obj 534 46 inlet~;
#X obj 594 46 inlet~;
#X obj 662 42 inlet~;
#X obj 722 42 inlet~;
#X obj 113 43 inlet~;
#X obj 163 43 inlet~;
#X obj 792 42 inlet~;
#X obj 852 42 inlet~;
#N canvas 0 50 450 643 \$0-compress 0;
#X obj 28 28 inlet~;
#X obj 176 20 inlet~;
#X obj 27 543 outlet~;
#X obj 177 544 outlet~;
#X obj 58 71 hip~ 5;
#X obj 121 71 hip~ 5;
```

```
#X obj 58 97 *~;
#X obj 120 98 *~;
#X obj 87 158 +~;
#X obj 87 281 rmstodb~;
#X obj 86 353 dbtorms~;
#X obj 27 484 *~;
#X obj 177 484 *~;
#X obj 25 272 /~;
#X obj 178 270 /~;
#X obj 201 390 dbtorms;
#X obj 86 417 /~ 0;
#X obj 86 197 sqrt~;
#X obj 86 442 *~ 0.25;
#X obj 310 55 loadbang;
#X obj 27 514 expr~ tanh($v1);
#X obj 177 514 expr~ tanh($v1);
#X obj 310 79 f 48;
#X obj 87 233 lop~ 10;
#X obj 120 123 lop~ 10;
#X obj 57 124 lop~ 10;
#X obj 86 314 expr~ if($v1>$f2 \, $f2+($v1-$f2)/4 \, $f2);
#X obj 202 367 expr (100-$f1)/4+$f1;
#X connect 0 0 4 0;
#X connect 0 0 13 0;
#X connect 1 0 5 0;
#X connect 1 0 14 0;
#X connect 4 0 6 0;
#X connect 4 0 6 1;
#X connect 5 0 7 0;
#X connect 5 0 7 1;
#X connect 6 0 25 0;
#X connect 7 0 24 0;
#X connect 8 0 17 0;
#X connect 9 0 26 0;
#X connect 10 0 16 0;
#X connect 11 0 20 0;
#X connect 12 0 21 0;
#X connect 13 0 11 0;
#X connect 14 0 12 0;
#X connect 15 0 16 1;
#X connect 16 0 18 0;
#X connect 17 0 23 0;
#X connect 18 0 11 1;
#X connect 18 0 12 1;
#X connect 19 0 22 0;
#X connect 20 0 2 0;
#X connect 21 0 3 0;
#X connect 22 0 26 1;
#X connect 22 0 27 0;
#X connect 23 0 13 1;
#X connect 23 0 14 1;
#X connect 23 0 9 0;
#X connect 24 0 8 1;
#X connect 25 0 8 0;
#X connect 26 0 10 0;
#X connect 27 0 15 0;
#X restore 143 301 pd \$0-compress;
```

```
#X obj 203 43 inlet~;
#X obj 253 43 inlet~;
#X obj 83 150 vline~;
#X obj 66 205 *~;
#X obj 113 207 *~;
#X obj 163 207 *~;
#X obj 141 150 vline~;
#X obj 211 205 *~;
#X obj 261 205 *~;
#X obj 238 152 vline~;
#X obj 334 155 vline~;
#X obj 304 206 *~;
#X obj 349 207 *~;
#X obj 479 203 *~;
#X obj 492 157 vline~;
#X obj 682 145 vline~;
#X obj 663 196 *~;
#X obj 723 196 *~;
#X obj 793 196 *~;
#X obj 853 196 *~;
#X obj 816 146 vline~;
#X obj 568 157 vline~;
#X obj 533 200 *~;
#X obj 595 198 *~;
#X obj 8 44 inlet;
#X obj 148 333 *~;
#X obj 492 277 vline~;
#X obj 220 335 *~;
#X obj 394 42 inlet~;
#X obj 439 43 inlet~;
#X obj 188 77 route kick snare clap hihat bass dubpad trichords syncer
master breaks;
#X obj 380 206 *~ 1.25;
#X obj 429 205 *~ 1.25;
#X connect 0 0 18 0;
#X connect 1 0 28 0;
#X connect 4 0 26 0;
#X connect 5 0 27 0;
#X connect 6 0 37 0;
#X connect 7 0 38 0;
#X connect 8 0 31 0;
#X connect 9 0 32 0;
#X connect 10 0 19 0;
#X connect 11 0 20 0;
#X connect 12 0 33 0;
#X connect 13 0 34 0;
#X connect 14 0 40 0;
#X connect 14 1 42 0;
#X connect 15 0 22 0;
#X connect 16 0 23 0;
#X connect 17 0 18 1;
#X connect 18 0 14 0;
#X connect 18 0 14 1;
#X connect 19 0 14 0;
#X connect 20 0 14 1;
#X connect 21 0 19 1;
#X connect 21 0 20 1;
```

```
#X connect 22 0 14 0;
#X connect 23 0 14 1;
#X connect 24 0 22 1;
#X connect 24 0 23 1;
#X connect 25 0 26 1;
#X connect 25 0 27 1;
#X connect 26 0 14 0;
#X connect 27 0 14 1;
#X connect 28 0 14 0;
#X connect 28 0 14 1;
#X connect 29 0 28 1;
#X connect 30 0 31 1;
#X connect 30 0 32 1;
#X connect 31 0 14 0;
#X connect 32 0 14 1;
#X connect 33 0 14 0;
#X connect 34 0 14 1;
#X connect 35 0 33 1;
#X connect 35 0 34 1;
#X connect 36 0 37 1;
#X connect 36 0 38 1;
#X connect 37 0 14 0;
#X connect 38 0 14 1;
#X connect 39 0 45 0;
#X connect 40 0 2 0;
#X connect 41 0 40 1;
#X connect 41 0 42 1;
#X connect 42 0 3 0;
#X connect 43 0 46 0;
#X connect 44 0 47 0;
#X connect 45 0 17 0;
#X connect 45 1 21 0;
#X connect 45 2 24 0;
#X connect 45 3 25 0;
#X connect 45 4 29 0;
#X connect 45 5 36 0;
#X connect 45 6 30 0;
#X connect 45 7 35 0;
#X connect 45 8 41 0;
#X connect 46 0 14 0;
#X connect 47 0 14 1;
#X restore 23 337 pd \$0-mixer ----------------------------------------
;
#X connect 0 0 1 1;
#X connect 0 0 16 0;
#X connect 1 0 14 0;
#X connect 1 1 9 0;
#X connect 2 0 1 1;
#X connect 3 0 13 0;
#X connect 4 0 21 10;
#X connect 4 1 8 4;
#X connect 6 0 21 1;
#X connect 6 1 21 2;
#X connect 6 2 21 3;
#X connect 6 3 21 4;
#X connect 6 4 21 5;
#X connect 6 5 21 6;
```

```
#X connect 6 6 21 7;
#X connect 7 1 11 1;
#X connect 7 2 10 1;
#X connect 7 3 8 2;
#X connect 7 4 8 3;
#X connect 7 5 4 2;
#X connect 7 6 4 3;
#X connect 7 7 4 4;
#X connect 8 0 21 11;
#X connect 8 1 21 12;
#X connect 9 0 3 1;
#X connect 9 1 8 1;
#X connect 9 1 12 0;
#X connect 10 0 21 13;
#X connect 10 1 21 14;
#X connect 11 0 21 15;
#X connect 11 1 21 16;
#X connect 12 0 1 0;
#X connect 12 0 20 0;
#X connect 12 1 21 0;
#X connect 12 1 18 0;
#X connect 12 2 4 0;
#X connect 12 2 8 0;
#X connect 13 0 10 0;
#X connect 13 0 4 1;
#X connect 13 0 11 0;
#X connect 13 0 6 0;
#X connect 13 0 18 1;
#X connect 13 0 19 0;
#X connect 13 1 7 0;
#X connect 13 2 12 1;
#X connect 14 0 3 0;
#X connect 14 1 8 1;
#X connect 16 0 15 0;
#X connect 16 0 17 0;
#X connect 17 0 20 3;
#X connect 18 0 19 1;
#X connect 18 1 19 2;
#X connect 19 0 21 8;
#X connect 19 1 21 9;
#X connect 21 0 5 0;
#X connect 21 0 20 1;
#X connect 21 1 5 1;
#X connect 21 1 20 2;
```

14 Makefile

```
LIBPD_DIR ?= ../../../

SRC_FILES = dynamo.c
TARGET = dynamo.html

CFLAGS = -I$(LIBPD_DIR)/pure-data/src -I$(LIBPD_DIR)/libpd_wrapper -O3
LDFLAGS = -L$(LIBPD_DIR)/libs -lpd -lm

.PHONY: clean clobber

```

```
$(TARGET): $(SRC_FILES) breakbeat.wav complex-mod~.pd hilbert~.pd main.pd
	emcc $(CFLAGS) -o $(TARGET) $(SRC_FILES) --closure 1 -s USE_SDL=2 -s ↙
	    ↳ ERROR_ON_UNDEFINED_SYMBOLS=0 \
	        --preload-file breakbeat.wav \
	        --preload-file complex-mod~.pd \
	        --preload-file hilbert~.pd \
	        --preload-file main.pd \
	        $(LDFLAGS)
```

15 quit-on-close.pd

```
#N canvas 3 58 450 300 10;
#X obj 40 40 iemguts/closebang;
#X msg 40 62 \; pd quit;
#X connect 0 0 1 0;
```

16 README

```
dynamo -- generative techno audio CD creation with Pure-data
Copyright (C) 2011,2018,2019  Claude Heiland-Allen <claude@mathr.co.uk>

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU Affero General Public License as
published by the Free Software Foundation, either version 3 of the
License, or (at your option) any later version.

This program is distributed in the hope of getting bodies moving,
but WITHOUT ANY WARRANTY; without even the implied warranty of
MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE.  See the
GNU Affero General Public License for more details.

You should have received a copy of the GNU Affero General Public License
along with this program.  If not, see <http://www.gnu.org/licenses/>.


To listen to the default version, open main.pd in pd.
Pd will quit when you close main.pd.

To listen to a randomized version, run "./start.sh".
Pd will quit when you close loader.pd or main.pd.

To render, modify "./render.sh" to your wishes (the defaults need around
20GB of free space), and run it.

To burn, something like this should work with output from "./render.sh":

$ cdrdao write --device /dev/sr0 --driver generic-mmc-raw dynamo.pd.XX.cue


To set up for exhibition installation:
- sudo adduser dynamo  # low privilege user account for installation
- sudo adduser dynamo audio
- sudo cp -i xfce4-session /usr/local/bin # kills all dynamo on logout
- sudo cp -i logind.conf /etc/systemd # ignores laptop lid switch
- sudo cp -i xorg.conf /etc/X11/xorg.conf.d/dontzap.conf # ignore magic keys
- configure xfce4 to autostart dynamo.sh on login, disable other stuff
- configure lightdm to autologin dynamo after a delay (eg 1min)
```

```
- disable as much xfce4 interactivity as possible, eg keep only one panel
  with window list and log out button
- install the pure-data kiosk-plugin in ~dynamo/pd-externals
- make sure important files in ~dynamo are not editable by the dynamo user
  (ideally owned by another user)
- make sure sshd is running and not firewalled in case of field surgery
- firewall all other ports, especially pd/pd-gui communication


To compile for web:
- set up empd as per https://mathr.co.uk/empd
  applying the *.patch to the pure-data folder
- put the dynamo folder in libpd/samples/emscripten/dynamo
- make
- mkdir live
- cp dynamo.data dynamo.wasm dynamo.js index.html live/
- cd live
- gzip -9 -k *
- serve online, making sure to serve the corresponding source code too

Copyright in complex-mod~.pd and hilbert~.pd remains with the original
authors of Pure-data (Miller Puckette and others), they are included here
because some distributions of puredata are missing them.  License terms for
these two files follow:

----8<----
This software is copyrighted by Miller Puckette and others.  The following
terms (the "Standard Improved BSD License") apply to all files associated with
the software unless explicitly disclaimed in individual files:

Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are
met:

1. Redistributions of source code must retain the above copyright
   notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above
   copyright notice, this list of conditions and the following
   disclaimer in the documentation and/or other materials provided
   with the distribution.
3. The name of the author may not be used to endorse or promote
   products derived from this software without specific prior
   written permission.

THIS SOFTWARE IS PROVIDED BY THE AUTHOR ``AS IS'' AND ANY
EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO,
THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A
PARTICULAR PURPOSE ARE DISCLAIMED.  IN NO EVENT SHALL THE AUTHOR
BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL,
EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED
TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE,
DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND
ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT
LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING
IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF
THE POSSIBILITY OF SUCH DAMAGE.
----8<----
```

17 render.sh

```
#!/bin/sh
for n in `seq 1 16`
do
  nn=`printf %02d $n`
  pd -noprefs -noaudio -r 44100 -batch -nrt -open loader.pd -send "load $n 1 ; pd dsp 1"
  flac --best --verify --silent --sector-align --delete-input-file --cuesheet=dynamo.pd.$nn.cue --tag="ARTIST=dynamo.pd" --tag="TITLE=dynamo.pd #$nn" dynamo.pd.$nn.wav
  flac --decode --silent dynamo.pd.$nn.flac
done
```

18 start.sh

```
#!/bin/sh
n=`openssl rand 1 | hexdump -e "1/1 \"%1u\n\""`
pd -open loader.pd -send "load $n 0"
```

19 THANKS

```
Thanks are due to:

Andy Farnell
Roman Haefeli
Chris McCormick
IOhannes m zmoelnig
Chun Lee
Aymeric Mansoux
```

20 xfce4-session

```
#!/bin/sh
/usr/bin/xfce4-session "$@"
killall -KILL -u dynamo
```

21 xorg.conf

```
Section "ServerFlags"
        Option "DontVTSwitch" "on"
        Option "DontZap" "on"
        Option "DontZoom" "on"
EndSection
```