Different Drummer Guide

v 4.5.1

iOS 8.0+

iPad 2+

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What's New?

Version 4 marks a major turning point for Different Drummer. A lot of work was done under the hood to allow for smooth playback while switching between interfaces and the consequence is much better performance, especially when Different Drummer is used with other apps and remains in the background.

The most significant change is the introduction of the Zenterface which gives you a whole new way to see and interact with the waves of Different Drummer. While you can play with the Zenterface for free, to use it for recording or to save work from it requires a modest one-time In-app Purchase. This is the first IAP added to DD so it helps to support the hard work that has gone into maintaining and evolving the app over many years. The Zenterface is fun but it's also quite good at dialing in more usable beats and sequences.

Other improvements include various UI enhancements and more practical ways of setting your preferences, even including custom color themes.

Also added are more useful ways to begin new wave sets, including easy access to templates you have saves as well as a dedicated Save Template button.

In 4.1, in the Zenterface only, you will find a new way to automate changes called the **Zen Phaser** that makes the "flower" turn and thus causes the music to change over time in a regular way. Don't worry, this Phaser is set on stun! *Requires In-app purchase.*

Experienced DD users will appreciate some of these new features and improvements more but new users will now have a nicer experience right from the start and that's the goal. Have fun!

New to 4.5

This version is now Universal and can be used on all iPads and iPhones (more limited)! Also added are 37 drum style presets such as Rock, Samba, etc. that provide great starting places to mess with or just get jamming with your guitar to. Harmony Styles were added to give your harmonies more variation. Some sounds have been switched up to 24-bit and Grid Mode works a little better too with Swing support. All in all, should be an enjoyable update.

Words for First-time Users

Thanks for giving Different Drummer some of your valuable time! Please approach it with a relaxed attitude and be patient while you learn a new paradigm for controlling music. It's actually an old paradigm that was invented for audio synthesis long ago but Different Drummer now applies it to musical structure instead of audio so parts of it will be familiar if you've used analog type synthesizers. The results will amaze you once you get into it. However, if you are looking to construct traditional beats like you do in other apps you may be frustrated at first. Think of Different Drummer as a special tool in your musical arsenal and remember there are a lot more rhythms and possibilities than you will ever have time to explore, unless you are immortal!

I recommend you start by familiarizing yourself with the Rest and Tie Waves. These two waves have a huge influence on the rhythm and once you understand them, the others will be more obvious. Also the Dynamics Wave is the key to rhythms with a human feel and flow. A good thing to do is to download free presets that other users have kindly shared in the Community. Those are a great way to learn.

One of the primary goals of this app is to provide a sense of musical enjoyment and wonder. It is my sincere hope that you will enjoy your time with Different Drummer.



Overview

As the name might imply, Different Drummer is a different kind of drum machine that uses the innate rhythmic power of waves to control all aspects of drumming using our patent pending Cyclophone Technology. As you will hear and see, Different Drummer is much more than a drum machine and it is more of a Music Machine because it's not limited to playing drums whatsoever. Since waves are the primal source of all cyclical motion in the Universe, it makes sense to tap into them for musical purposes other than synthesizers. Not only can waves create sounds, they can play sounds and compose music too. We feel we have discovered the "Fountain of Drumming" and we are sharing our discovery with the world!

While this software is definitely fun to play with, real production is what it's for—saving wave patterns and combining them into sequences and recording tracks or as a live performance tool. It can also be used to inspire new ideas for drum patterns or rhythmic ideas for songs because, as you will find out, the variety of rhythms is nearly endless. If you are serious about your music tracks, Different Drummer is a must-have tool! Pros can use the direct MIDI out and MIDI sync features to use this for much more than drumming, for example, to play complex musical wave patterns. You can also play other synthesizers and drum machines on your iPad or externally.

Different Drummer is not a synthesizer. People often mistake Different Drummer for a Drum Synthesizer because of the Wave Controls. Different Drummer has little to do with how drums sound and everything to do with how they are played. Different Drummer is like having a drummer that plays drums in a fresh new way. The drum samples provided come to life under the control of Different Drummer's unique algorithms. In a bizarre way, it ends up being a new "macro synthesizer" because it can play samples in such a new way that the effect is a new sound. You can also import your own drum and non-drum samples for incredible results. This doesn't mean we won't build a drum synthesizer into future versions!

The Waves

The main saved module of Different Drummer is the Wave Set which is a collection of up to 8 Drum Waves, each of those composed of six Control Waves:


Note Wave: Allows you not just to have plain drums, but also drums that change pitch inside an assigned scale. You won't believe the difference "tonal" drumming makes to your productions. With Different Drummer you set the key and scale of your drums and can change it on the fly for enhanced impact. After using Different Drummer you'll discover that many drums are out of tune with the songs they are used in creating subtle harmonic dissonance.


Rest Wave: Lets you create gaps in the drum pattern based on the interaction between a wave pattern and a line. The rest wave has a huge impact on the perceived rhythm since it determines where notes can play or not play.


Tie Wave: Lets you create rhythmic variations that tie drum notes together or break them apart based on waves. Tie waves have an intense effect on rhythms and are reliant on the wave's assigned beat-value that determines how fast or slow untied notes play.


Dynamics Wave: Lets you control the loudness or velocity of drum strikes creating a very human feel. Slower dynamic waves create crescendos while faster waves can create complex accents.


Panning Wave: Lets you control the left-right position of drums dynamically creating interesting spatial effects.


Beat Wave: Lets you change the underlying beat value based on wave amplitude at a given point in time.

Each of these component waves is composed of a Fundamental wave and 6 partials of that fundamental, making for an astronomical set of variables that allow you to dial in any rhythm imaginable and many more that are unimaginable—the whole point of Different Drummer.

The Advanced Interface

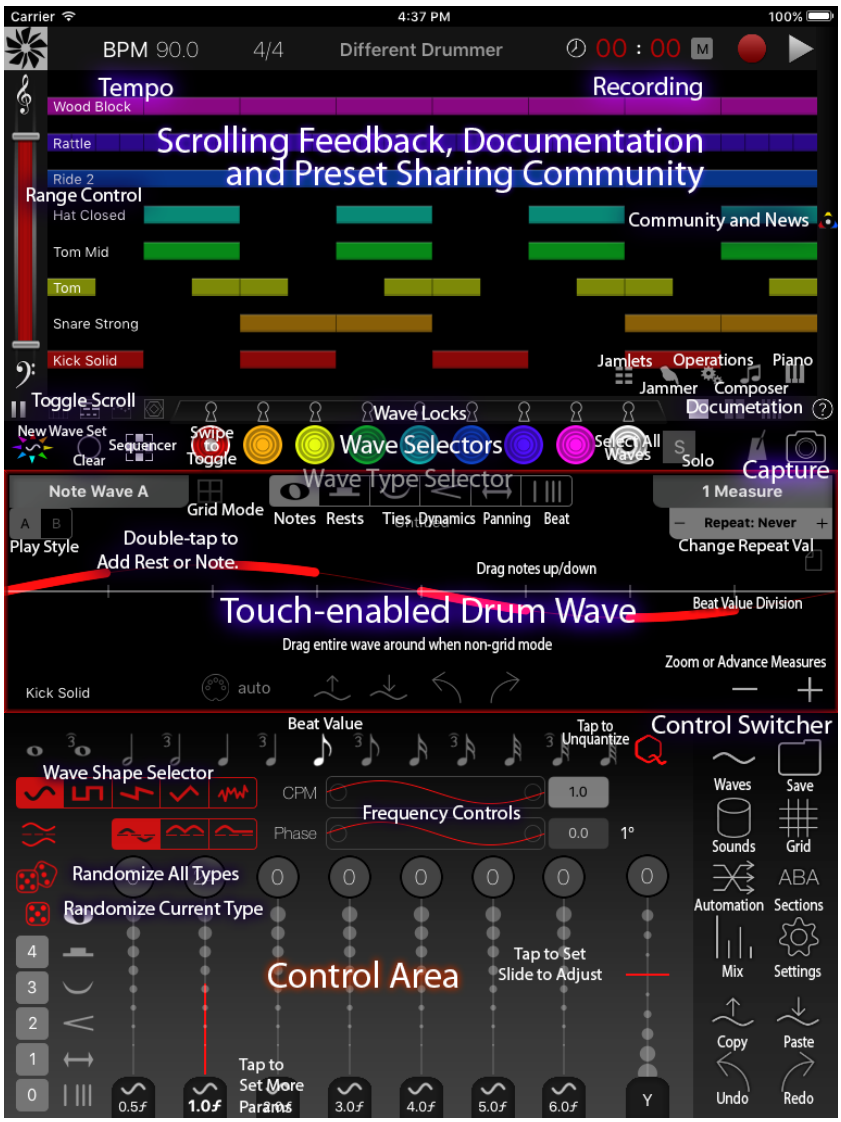
All Different Drummer functionality is conveniently packed in to an easy-to-use interface broken into three main sections:

The **Scrolling Visualizer** at top shows drum notes as they are played so you can get an idea of which voices are doing what in real-time. Vertical lines depict measures. Above this area are a few controls for: Master Tempo, the Metronome and the all-important Play-Pause button. Use the Range Control to limit final output of each voice to a specified range. Bring up the Piano Transposer to change drum or musical keys on-the-fly or bring up the progression controller. You can also access the Jam Panel (finger) and the Operations Panel (gears) at the lower right next to the Piano icon.

The **Touch-enabled Wave Display** is an important section where the currently active editing effects are shown. Pinch the wave to change frequency or slide it to change position or phase. Zoom in or out on a wave using the + and – buttons to see how it looks over 1 measure or up to 16 measures or, when in Grid Mode, switch between measures of your loop pattern. Above the Wave Display is the Wave Selector which allows you to select, solo and mute waves. The White selector is used for any actions or adjustments you want to perform on all the waves at once. Toggle into Grid Mode to capture the wave in a traditional fixed grid loop up to 16 measures long. When in Grid Mode, you can override the wave and add, delete and move notes as desired. You can combine grid and non-grid voices.

The **Control Area** at the bottom (right when in landscape) of the screen is where most of the action takes place. This is where you construct and explore wave patterns and save them as well as make sequences or set up automation. You can also export wave sets as MIDI files to be used in other applications via the iTunes Documents Panel or email.

On the right side of the Controls is the Control Switcher that is used to move between different control panels.



Wave Frequency (CPM) and Amplitude Controllers let you dial in an endless variety of note, rest, tie, panning, beat and dynamic settings that work together to create distinctive drum patterns never before possible. We provide convenient randomizers to help you explore the vast array of possibilities which you can then tune to your liking and save or record.

Use the button in the very upper left to switch to the Zenterface. (See **Zenterface** Section Below)

The icons for switching between the different Control Panels are as follows:



Wave Controls: To Adjust all wave parameters



Automation Controls: To create automated morphing sequences based on randomization



Control **Sounds** and **Scales**



Control **Grid Mode** settings



Mixer: To add effects and alter the volume of the drum tracks



Wave Manager: To save, load, rename, delete and export wave sets



Sequences: To string together wave sets to create compositions for live playback or recording



Setup: To control MIDI and Audio outputs and other general settings

Uses for Different Drummer

- Quickly create credible, copyright-free drum parts and share them between projects, 1 track or 8 tracks at a time
- Create next-level drum parts perfectly tuned to your songs and hear the difference.
- Idea generator/scratchpad obliterates writer's block
- Create rich backing tracks for layered electronic music
- Live performance
- DJ mixing
- Dubstep and Hip Hop
- As a MIDI controller for either drums or music
- Stay ahead of deadline production schedules
- Commercials and promo materials
- Experimental music
- A new kind of arpeggiator
- Algorithmic Raves
- Entertainment/relaxation, set it on automate and sit back



The Wave Editor

This important panel is used to edit all aspects of a Drum Wave or all Drum Waves at once.

There are five Control Waves that govern the behavior of a single Drum Voice. They are the basis of the theory of Different Drummer which comes out of Holistic Tonality Theory and derives from other Techné Media software such as Cyclophone and HyperChord. These Control Waves are:



Note Wave: This wave controls the pitch of a drum. For plain drums, use a flat wave here. The midline is middle-C.



Rest wave: This wave controls where drums cut in and out. Anything above the midline is a rest and thus silent and below the line plays



Tie Wave: This wave controls whether consecutive drum notes are tied together or played separately. Anything above the midline is untied and anything below will be tied together (legato).



Dynamics Wave: This wave controls the loudness of the drum notes when they play



Panning Wave: This wave controls the left-right positioning of drum notes



Beat Wave: This wave changes the beat value over time

Use the **Invert** Button to flip waves vertically.

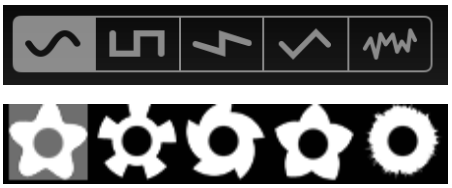
All waves are governed by 12 Parameters which shape the waveform and musical feel:



Beat Value Selectors: Determine the value given to untied notes or in the case of Grid Mode, the grid resolution for a looping pattern. Tap the hex Q to toggle quantize on/off. When unquantized, notes will play more exactly when the wave dictates instead of waiting for the next available beat.

CPM/MPC: Cycles per Measure or Measures per Cycle which in mathematical terms is akin to Frequency. Frequency is expressed relative to a fixed musical unit of one measure, controlling the the *Fundamental Wave*. The Fundamental wave is the main wave and all the other adjustments are related to this "Carrier Wave." As wavelengths get longer than one measure, the label switches to Measures per Cycle to indicate a longer period. PINCH in the Wave Display area to change the CPM value or use the **CPM Control**. You can type in a precise number too.

Phase: This determines where in the wave's cycle it starts. Use a single finger swipe in the Wave Area or use the **Phase Control** to adjust. You can type in a precise value. See below for full details.



Wave Shape: Determines if wave is a smooth sine wave or abrupt square wave or other types. When you select Square Wave, an additional button will appear to control the pulse width. Touch this and swipe up or down to adjust or type in the value by tapping the text.

In the Zenterface, Wave Shapes are expressed in their circular forms but they are identical in meaning.



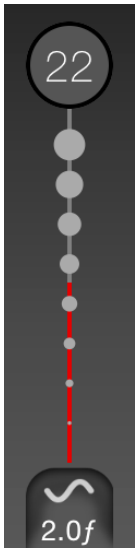
Wave Style: Waves can generate in three styles:

Normal: where they go above and below the X-axis

Mirrored: where they are reflected to one side of the axis

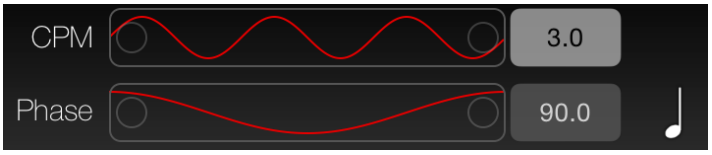
Clipped: where they are limited to one side and zeroed on the other

Amplitude Controllers: These special controllers work by tapping to set and dragging to fine adjust. They are not sliders any more! Drag as far as the screen will allow. Each one controls the amplitude of a given *ƒ-multiplier* of the Fundamental CPM so 1.0 controls the main frequency. You can change the multiplier to whatever you like by tapping the ***ƒ*** button on the end (see Partial Settings below). Tapping near the base will set the value to zero but you can drag to get small values.



Y-Position: this shifts the wave up and down. Tap near the center to reset to zero.

CPM and Phase Controllers



These controllers give you more precise control than a slider. Finer control occurs when you first touch and slide and as you move further course control increases the steps. Phase is circular so it will go back to the beginning or end when you reach the limit of 360°. Tap the ends to change by discreet increments. When it changes to Measures per Cycle, you will see a single cycle and then measure lines instead.

Note Wave Settings



Above is an example of a simple 1-cycle per measure wave where only the Fundamental Wave is given

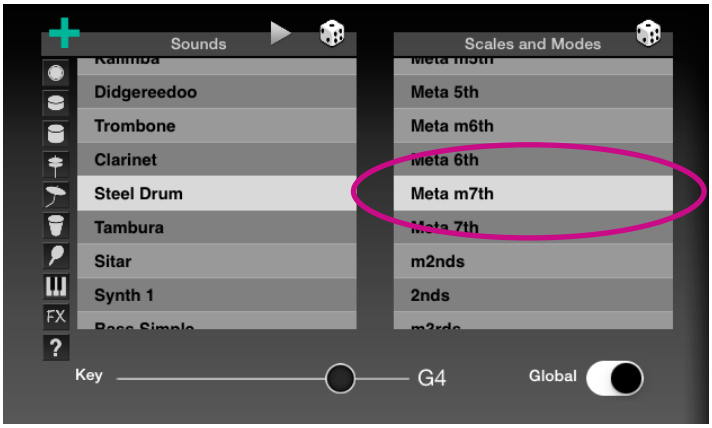
some amplitude. By adjusting partial amplitudes, the wave form can become more complex and less predictable, though it always creates a repeating pattern, making it suitable for drums.
By giving waves odd frequencies (CPM) they can be made to repeat in ways that create endless variation between the voices since each voice has independent frequencies.

Even so, if you want to, you can force any wave to exactly repeat after a certain number of measures by using the Repeat Selector button in the upper right of the center wave view. It appears in non-grid mode.

A dashed line indicates there is a rest wave in effect that is "eating away" at the note wave based on separate parameters. To control the rests, switch to the Rest Wave.

To produce a plain drum that doesn't vary in pitch, simply flatten the wave by setting all the *ƒ* values to zero or by tapping the 0 button.

If you do give the note wave any amplitude, it will start to apply new pitches to your drum according to the currently selected musical scale which is selected from the Scale List.

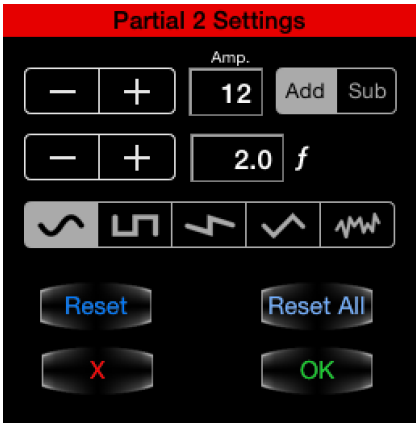


Editing Notes in Grid Mode
When you are on the Note Wave and you are in Grid Mode, the middle Wave Display area takes on some different capabilities. For example you can drag notes up or down and can hear them at the different pitches based on the current scale and key. Double-tap a note to turn it into a rest or double-tap a rest to add a note.


For editing convenience, there is a Measure Loop button that appears. When this is on, the currently selected measure for the current voice, will loop so you can edit it. This setting does not get saved with the wave since you can set Loop Length already.

Partial Settings





When you tap one of the *ƒ* buttons it brings up the Partial Settings for that partial where you can change the behavior and math assigned to itl. The permutations caused by these setting are truly astronomical when combined with all the waves.

Use the **+/-** numerical steppers to precisely change the amplitude or multiplier of the partial.

Add and **Subtract** determine whether the amount of the amplitude value is added or subtracted from the total amplitude, essentially flipping the wave vertically at the set frequency.

You can edit the actual ***ƒ* Factor** by tapping the *ƒ* number text field. There is no limit so play around with extreme numbers such as .01 (1/100th frequency) or 777, etc. This can have astomishing effects on the pattern. You can also enter a fraction such as 1/16 and it will calculate the decimal for you.

Shape can be assigned to individual partials so you can combine different shape types for further extreme variations.

To **Reset** the selected partial to its default values, tap Reset or to reset all partials at once tap **Reset All**.

X closes the dialog with no further action and **Done** will capture the settings.

Each Wave Type has its own set of Wave Partials so this is like adding 7 x 6 x 4 = 168 new parameters per voice!

Rest Wave Settings



Controlling the Rest Wave is identical to the note wave: CPM, Phase, various amplitudes and position. However, in this case the wave has a different meaning and wherever it touches or goes above the midline, it carves a rest into the drums. You can use your fingers directly on the wave to position it or use the amplitude controls. Adjusting the rest wave only affects the gaps in the main note wave but has no other effect on that wave. See Play Styles for the A/B options.

Phase and Position are very important in the Rest Wave as they can greatly effect syncopation.

Beat Value has no effect on the Rest Wave.

Tie Wave Settings



The Tie Wave works similarly to the Rest Wave except in this case, wherever the wave goes above the midline, it Unties the notes. So wherever the dashed line appears darker, it is tied. Where it is brighter it is untied. When it is tied, if two notes in a row are the same, it won't strike the second note but will sustain it like a musical tie does. If it is untied, of course it will strike a new note whenever it encounters one.

This can be very much effected by the **Beat Value Selector** because that determines how often it tries to play a new note.

Dynamics Wave Settings

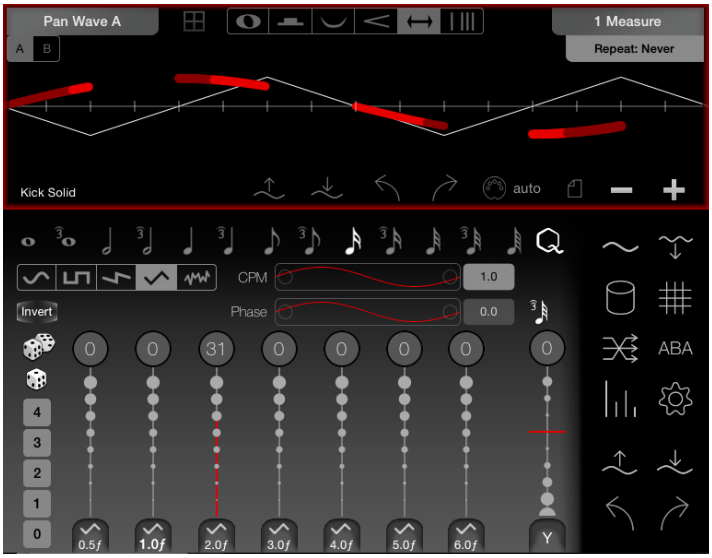


The Dynamics Wave simply causes the notes to be played louder or softer according to the contours of the wave. By creating interesting shapes in the dynamics you can create a very human feel and when combined, all five waves produce an astounding variety. **Play Style A** sets dynamics when notes are played. **Play Style B** sets them continuously for some strange effects.

The combined effect of above four musical waves is shown in the drawing of the wave as follows in the Color of the selected wave:

Notes: the Y-position
Rests: the Gaps in the dash
Ties: the Brightness
Dynamics: the Thickness

Panning Wave Settings



The Panning Wave works similarly to the other waves except it controls the stereo positioning of drum notes dynamically. You can use it subtly or in a radical manner making drums jump around in interesting ways.

Beat Wave Settings



The Beat Wave is like having a wave control the Beat Value Selector and behaves differently depending on the ABCD selector.:

A whenever wave goes below midline beat value is 1x current beat value and above zero is 2x and above 50 is 4x.

B is same as A except the values are 1.5x and 2x

C is same as A except it also uses the negative values to control beats where near zero is 1x

D is same as C but uses the 1.5x and 2x

When Beat Value is 16th ot shorter the effect is inverse to make it more musical and less bizarre.

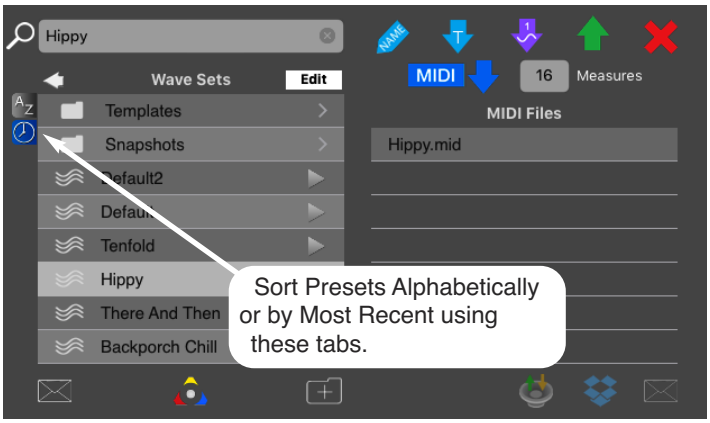


Tapping this button will randomize all the waves (Note, Rest, Tie, Dynamics, Panning) for the currently selected Voice(s). Lift your touch outside the button to reset the voice.



Tapping this button will Randomize only the current wave type for the current voice.

The Preset Manager



Use this panel to save Wave Sets (presets) or individual Waves that you've created and load up or delete those that you have saved. At any time, you can come to this panel and save the current Wave Set by typing in a name and tapping the **Save** button (Blue Down arrow). A Wave Set is the sum total of each of the colored waves (up to 8). First give your Wave Set a name in the top left text field before saving. To Save as a **Template**, tap the Blue Arrow with a “T” in it.

Load waved sets by selecting a name from the list and tapping Load button (Green Up arrow).

Delete Wave Sets by selecting it from the list and tapping Delete (Red X).

To **Rename** a Wave Set, select it in the list and immediately type in a new name before editing the wave. The Save button will turn into a Name button when this functionality is active. **Find waves** matching your text by tapping the Search icon,

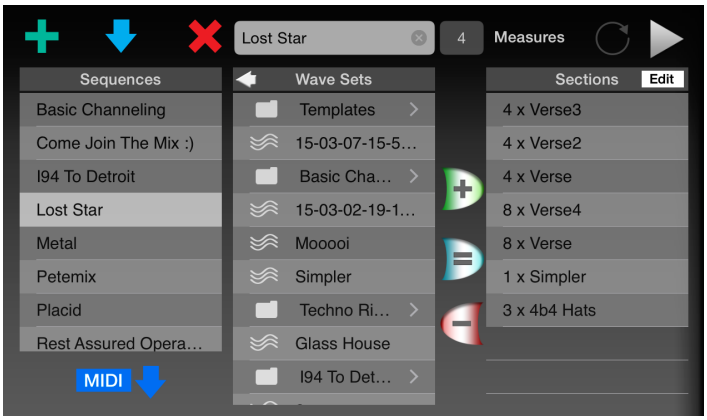
To convert the currently active Wave Set into a **MIDI file** of *n* measures duration, first type the desired number of measures into the Measures field, then tap the Make MIDI File button. You can Delete a MIDI file

by selecting it and tapping Delete.
Email or save to **Dropbox** and selected wave preset by tapping the respective icon.

Create Folders with the Folder Button, first give it a name. Then you can tap Edit to drag items just past the Folder row to place them in a folder. Remove them from a folder by doing the same within a folder or delete the folder and the items will move out a level.

The **Templates Folder** is created automatically and is always found at the top of the list. Use this folder to store presets that are good starting points to design new presets such as certain kick and snare patterns you like.

The Sequence Manager



Use this panel to string together wave sets and create sequences which can be used in performance or recording.

To create a **New Sequence**, tap the Blue-green Plus Button and type a name into the field that appears. Then select Wave Sets from the available Wave Sets List in the middle and enter in how many measures you would like it to repeat to the right of the name field. This number will appear like 4x to indicate 4 times (measures).

Tap the curved Plus button to add your Wave and duration to your sequence. Continue adding until you are ready to save and then tap the Save button to finalize.

Your new sequence should appear in the left hand column.

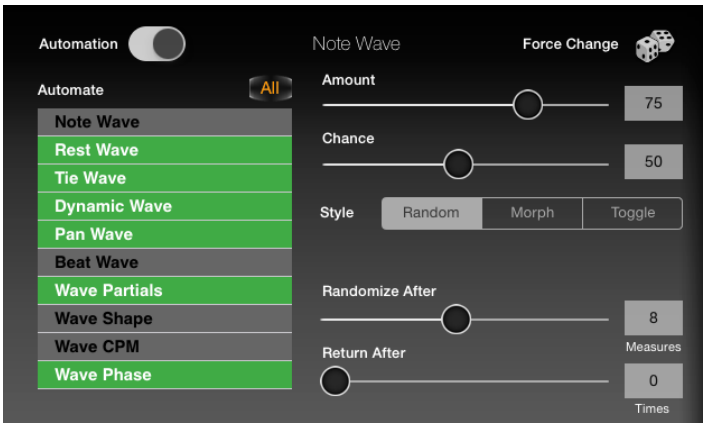
At any time you can select saved sequences and then play them by tapping the **Play Sequence** button or modify them and hit Save again to update the file.
Remove any selected Wave Set in the Sections List by selecting it and tapping the curved Minus button.
Replace a selected item by tapping the Equals icon.

Delete a Sequence by tapping the Delete button after you select a sequence from the Sequences List.

Change the order of Sections in your sequence by tapping the Edit button and dragging items.

You can also convert sequences into MIDI files for use in other applications.

Automation Controls



Use this panel to make Different Drummer automatically create new drum patterns after a certain number of measures.

Automation On/Off: If on, then automation will take place as soon as you hit play or if already playing will kick in.

Toggle items in the **Automate List** that you wish to be randomized. When gry, the parameter will be skipped, leaving its current value.

The **Amount** slider determines the level of randomization to apply.

The **Chance** slider determines how likely the parameter is to change each time. Amount and Chance are independent for each parameter, the currently affected one is displayed top center.

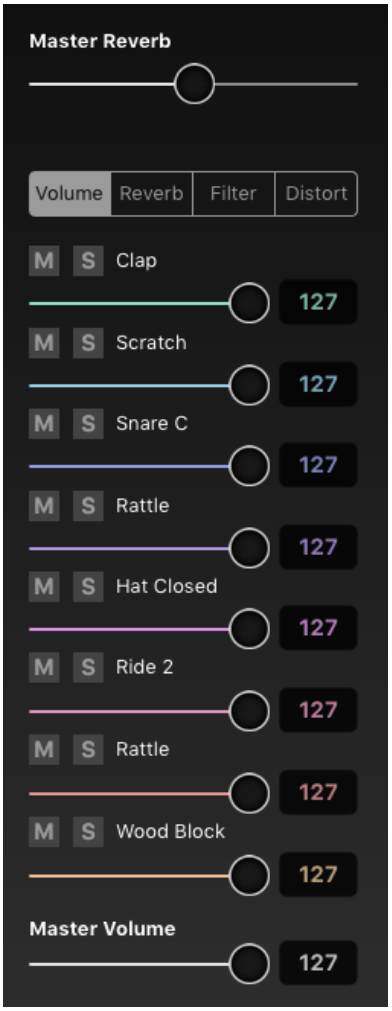
You can also tap the dice to force a new randomization.

Randomize After determines how many measure go by before it randomizes the waves.

Return After determines how often the automation will return to the original theme to start over. The original theme is captured at start of Automation.

Automation Style is also per parameter and not all parameters accept all styles and there is more work to do here. The idea is Random fully randomizes, Morph gradually randomizes and Toggle swaps between the default value and zero.

The Mixer



Match the color of the voice you wish to adjust and then move the corresponding slider from 0-127.

Master Volume is controlled by the White slider

The Master Reverb Slider controls the amount of reverb applied to the master mix. For a drier mix move it more to the left and wetter, to the right. You can assign individual effects to each channel by using the Effects Selector:

Volume: the channel volume
Reverb: the amount of reverb for a given channel
Filter: A Low-pass filter that will cut more bass frequencies as your go higher
Distortion: a Toggle for adding channel distortion. Will be improved in the future.

Tap **M** to **Mute** a track and the **S** to **Solo** a track. These don't effect the voice toggles.

The Grid Panel



Use this panel to control the parameters of the Grid Mode for a given voice.Switch **Grid Mode** on or off (you can also use the Grid Button in the Wave View area).

Grid Resolution determines how many notes to allow per measure.

Loop Length determines how many measures to give your pattern for this channel. Each channel can have its own loop length and grid resolution.Use the stepper to go further than 128 measures or for fine control.

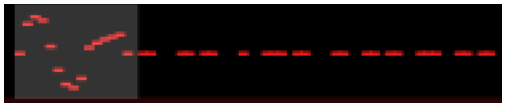
Shift Notes will move all notes on the grid one slot left or right.

Keep Measures is a toggle that causes the grid to get "resampled" as is when on when you change beat value. Otherwise the same exact notes will fill fewer or more measures.

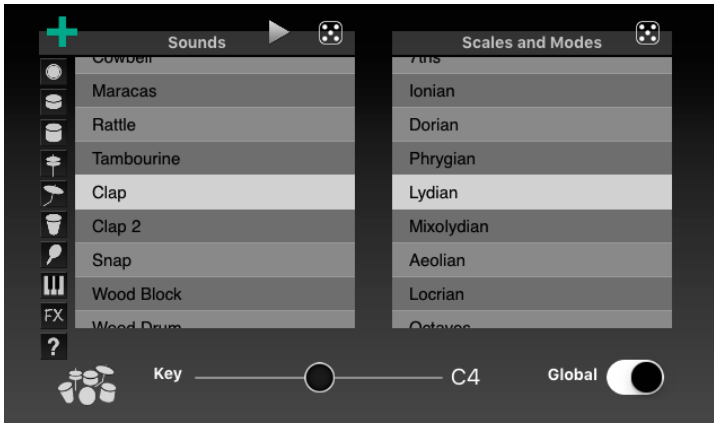
Load MIDI File will open AudioShare where you can pick a MIDI file to import which will bring up the MIDI Import panel (see below).

When in Grid Mode and *Note Wave view*, you can drag notes up and down or double-tap to toggle them. You can copy one measure to another using Copy and Paste.

Also, you can navigate to different measures using the Grid Navigation tool where current measure is highlighted:



The Sounds and Scales Panel



Use this panel to control the sound that is used for each voice and the scale to use.

Sound Category buttons are used to scroll to related types of sounds: Bass, Snare, Toms, Hats, Cymbals, Skin Drums, Percussion, Tonal instruments, Effects and Custom sounds you import respectively. If the White Wave selector is on, then the same sound will be assigned to all channels.

Scales (or Modes) can be assigned to each channel or if **Global** is on, all channels will get the assignment.

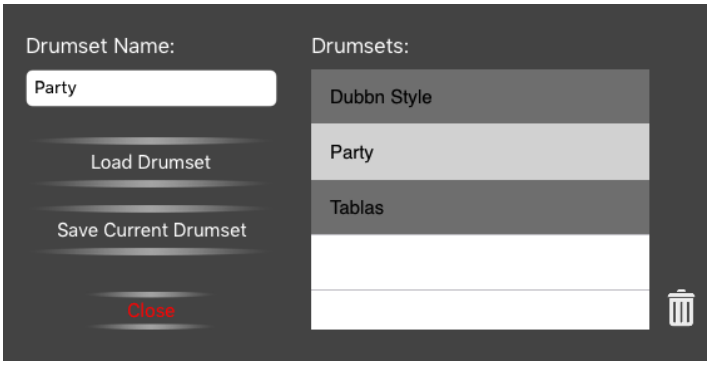
Key is a global setting and can also be controlled using the Keyboard in the Scrolling Area.

Add Custom Sounds by tapping the Blue-green Plus button (see below).

Select random sounds or scales by tapping the Die buttons at the top right of the lists.

Drum/Sound Sets

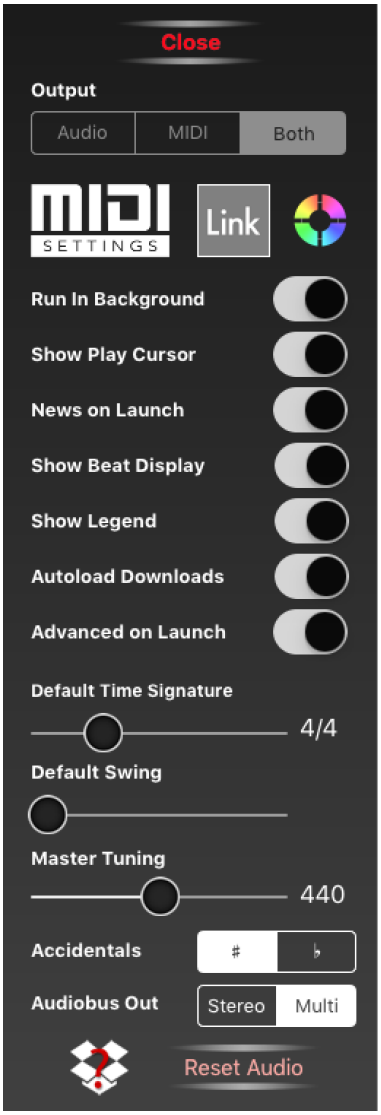
New to version 4 is the ability to save sets of sounds and recall them independently of Wave Sets. To save a new Sound set, simple select sounds for all your current voices, then tap the Drum Set icon in the Sounds Panel. This will then bring up the Drum Set Manager show below.



Just give your set a Name and then tap Save Current Drum Set and it will appear in the list on the right.

To use a saved set, select it in the list and tap Load Drumset or if you are in the Zenterface, simply select it from the dropdown menu that appears. You can delete a set using the Trash icon and it has no effect on samples you have collected, just the named set.

The Settings Panel



This is used for general settings that apply mostly to the output of Different Drummer.

Output: Select whether you want audio, MIDI or both for output.

Run In Background: Determines if it's OK for Different Drummer to keep playing while not being the front app. If you use it with Audiobus, leave this on.

Default Time Signature: Use this to set the length og your measures and the beat value. 5 and lower are over 4, ex. 5/4 and above are over 8, ex. 6/8. Changes don't occur until you release your finger. This does NOT effect current waves, just the default setting for new wave sets.

Default Swing: Adjust this to "swing" eight notes more or less. *This only effects the default swing of new sets so be aware of this.*

Auto Downloads: When on, Community Presets will be loaded immediately after downloading.

Reset Audio: Use this if you are experiencing audio issues.

Dropbox Status: Use this button to connect or disconnect your Dropbox Account. When the Green Check appears, it's connected.

Advanced on Launch: Is on by default but if you want to come up in the Zenterface, turn it off.

Master Tuning: If you want to work off a different tuning system, this slider allows that. All notes will be relative to this A pitch setting.

MIDI Settings brings up the new MIDI Settings panel (see below)

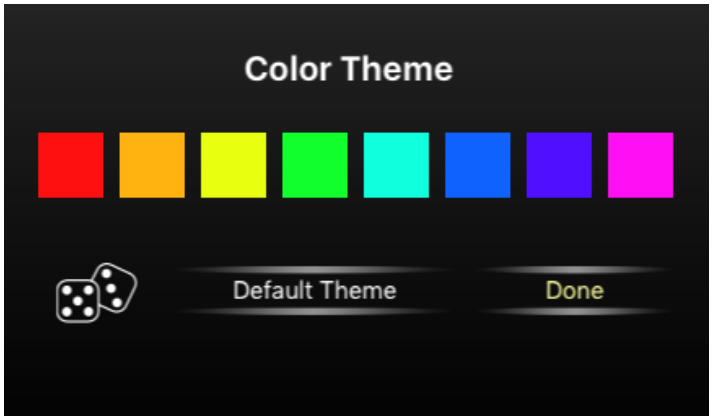
NOTE: In landscape mode you may have to scroll down to see certain controls.

Accidentals selector determines if Sharps or Flats (enharmonic) are used in conjunction with Key changes.

Audiobus Out determines whether you get one stereo mix out or 10 separate channels.

All settings are saved in your preferences.

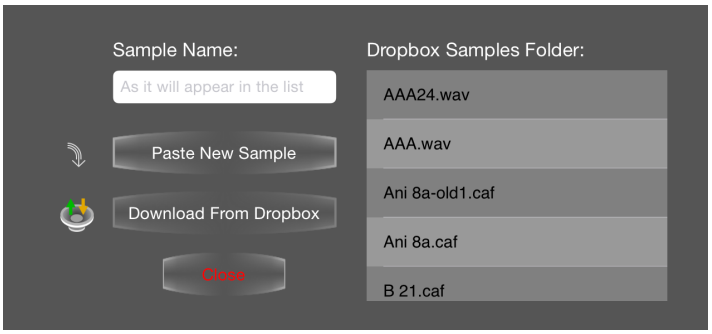
Color Themes





Tap the color icon at the top to bring up the Color Theme Editor. Tap on a color to bring up the Color Picker and hit OK to set the color for that wave. Or you can experiment with the Random color themes and you can always revert to the Default Colors. Keep in mind that the background is black so don't make your colors too dark for maximum contrast.

Adding Custom Sounds



When you are in the Sounds Panel, you can Tap the Blue-green Add Button to bring up this panel up top. If you have copied some sound from a supported app, your can give it a name and the tap the Paster New sample button and the sample will be added alphabetically to the bottom of your sound list. If your **Dropbox** account is linked and your have a folder called Samples in the Different Drummer App folder, any WAV or CAF files in that folder will appear in the list on the right. Select a sample and tap **Download from Dropbox**. You can rename the sample as you wish it to appear in your list by entering the name. Tap the **AudioShare** icon to import from that app if you have it.

Custom sounds can be deleted by tapping the Trash Can icon in the sounds list. Any Presets using that sound will load a default drum for deleted samples.

Recording Audio



Recording can be done in one of two ways:

Manual Recording of either an unknown length of a pre-determined length

Record a Pre-determined Length of music with automated start and end



To set your **Recording Preferences**, tap the Time Style icon to the left to bring up the Recording Settings. Here you can chose to Manually rcord or Automatically up top. You can also set whether you want recoding to be by time or by measures. When Auto Recording is selected, additional controls are activated that allow you to set the length of the recording.

Tapping the **00** button will toggle between Manual and Auto Recording.

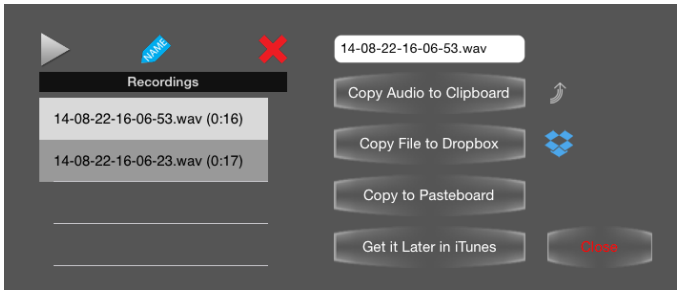
When Recording is set to Manual, you need to manually stop recording when you are done.
Commence recording in one of two ways:

On-the-fly: while *playing*, tap the Record Button and recording will begin immediately. If no limit is set it will continue recording until you tap Stop Record (flashing Red Square).

Controlled: while *stopped*, tap the Record Button and it will turn Orange. Tap the Play Button to begin recording or tap the Record button again to cancel the action.

When recording has stopped, you will see the **Recording Manager** appear up top.
At any time, while stopped, you can get to the Recording Manager by tapping the Record Button.

Here is where you can listen back, rename and delete recordings as well as export them.



To **Rename**, simply select a recording from the Recording List, type in a new name and tap the Name Button.

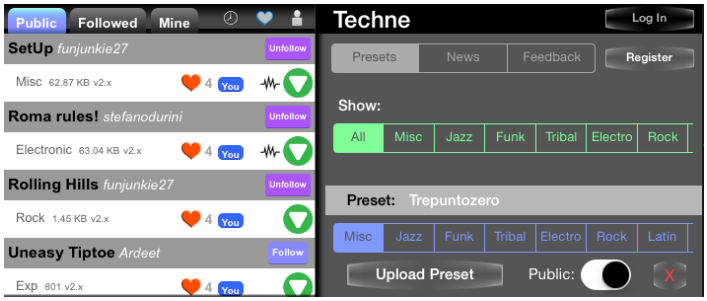
To use a recording in another application, you can either try the various Copy and Paste buttons to see if they work with your target app. Otherwise you may want to save the recording to your Dropbox account (free) and access it from there.

Of course, you can also record directly out via Audiobus or Inter-app Audio which is handy when you want to incorporate other Effects or DAW software.

Wave Selectors

Tap one of these color-coded Wave Selectors to make a wave the current wave (it will display a white outer border) or if already the current wave, will toggle the voice. Use a sliding motion to toggle a wave on/off. Solo/unsolo a wave by tapping the S button. *When you select the White Wave Selector, anything you do will effect all waves at the same time.*

Accessing the Community



Whenever you tap the community icon (above), the Community Panel will appear up top. If you don't have Internet Access, then it's pretty useless since it reaches out to our server to get news, preset lists and feedback. You also can't post presets without Internet access on your iPad.

The Community has three main functions:

To give access to free presets and samples that other users are kind enough to share
To display messages and news about Different Drummer
To allow users to provide Feedback about Different Drummer

You don't need to log in to download presets but if you want to upload them or add feedback, you need to be logged in.

In order to Log In, you first need to **Register** using the Register Button. To register, tap the Register Button. Just make sure to *give yourself a nice user name* as this is how others will see you. You can actually register multiple identities if you want but they have to have unique email addresses.

You usually only need to log in once using your email and password provided at registration. Your User Name will appear in large letters up top.

To **Upload Presets or Sequences**, first select a Preset from your Wave List or a Sequence from your Sequence List. Then, please **select an appropriate category** in the blue selector and tap Upload Preset. If Public is turned off, only you or those that follow you will be able to see your preset.

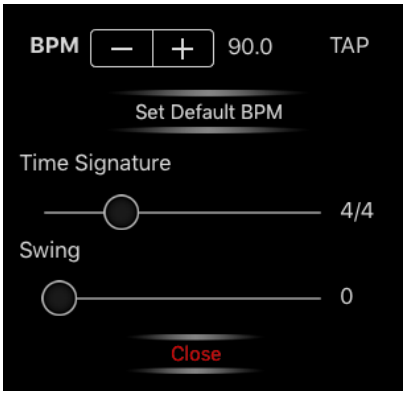
Submit **Feedback** by typing into the Feedback field and tap Submit Feedback.
You can delete your presets at any time by tapping the "Mine" tab in the Community Preset List and then tap the Red X.

Sort Presets by Time, Likes or User using the icons to the right of the list. Tap it twice to switch order.

Capture Wave Set

Tapping this button will save the current wave set using a YY-MM-DD-hh-mm-ss naming convention. You can rename it later (recommended).

Tempo Controls



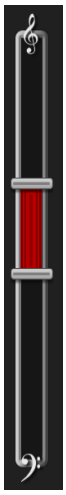
In Advanced Mode, the Tempo Controls are evoked by tapping on the Tempo Indicator up top. In the Zenterface you drag left and right to adjust Tempo. Tempo is expressed in **Beats Per Minute** (BPM). This is how many quarter notes play in a minute. Use the BPM Stepper to raise or lower the tempo. Holding your finger on the button to accelerate the rate change.

Tap on the BPM number to enter a precise value or alternatively, tap a rhythm you are trying to match using the Tap button. The more you tap, the more accurate the average is.

Tap "Set Default BPM" to set the current BPM as the default. This will be saved and when you tap the New Wave set button, it will use this BPM.

You can also set the current Time Signature and Swing values here. These are saved with your Wave Set.

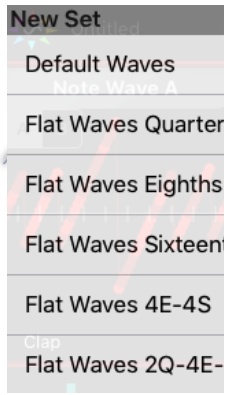
Ranger Controller



Slide the top or bottom thumb to limit the final output range for a given voice or all voices if White is active. Move the whole range around by touching in the middle and sliding up or down. By setting top and bottom on the same note you can force Different Drummer to play only that note, regardless of the musical scale or key. This can be a great imrov tool by actively messing with a voice's range while playing.



Starting a New Wave Preset



Tapping this button brings up the Template Selector. Choose a new starting point for your set from the stock templates or down below and templates you have saved in your Templaes Folder will appear. This will also enter your Registered name as the author of this new preset when shared in the Community.



Tapping these buttons in the Wave Panel will set the wave to a simple division of the measure corresponding to the number or in the case of 0, flatten the wave. Releasing outside the button will give an alternate value.

Composing Presets

There are no set rules for creating wave presets but it can be frustrating for beginners to "tune in" an exact result. We suggest taking a more exploratory approach, taking advantage of randomizers and *automation* to find something interesting. Then use the Capture Button (camera icon) if you hear something you like. You can then later tweak your captured wave.

When you do know exactly what you want, we recommend trying the Grid Mode where you can set drums/instruments on exact beats you want. However, you may want to play with the Wave controls while in Grid Mode where you get the best of both worlds. You can then adjust, add or remove notes once they have been captured in the grid.

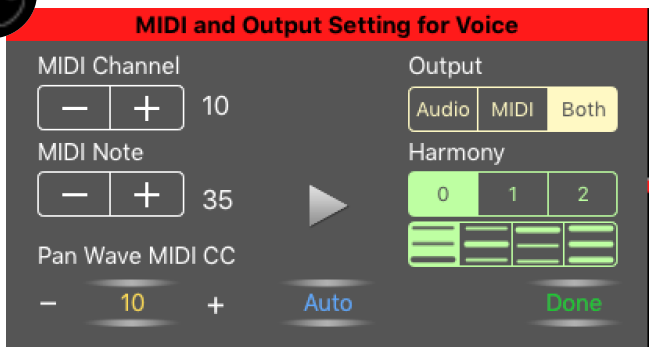
The Rest Wave is a powerful influence on the rhythm and often making small adjustments to the Phase or Position can be the difference between a good rhythm and a great one.

Dynamics is one of the most important tools in the musician's toolbox. Use the Dynamics Wave liberally to bring more expression to your beats and breathe life into them. Without this, music gets dull and monotonous quickly.

One great way to learn Different Drummer is to study what others have done by downloading Presets from the Community.

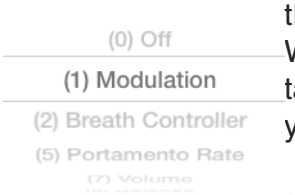
When composing presets to upload to the Community, we recommend that you compose all 8 channels, even though some might be turned off. That way users can turn them on to add enhancements that create nice remixes of your main composition.

Setting Output Options for Voices



Tapping this button allows you to assign a MIDI override to a given voice. Regardless of what you set in the Settings Panel, this will cause the voice to route to a specified MIDI Channel. Auto indicates it will pick up the global setting. You can force the MIDI output for channel to a specific note which is handy for some synths that play certain drums only on certain notes. Auto will set the notes back to what Different Drummer calculates.

If you are using MIDI, then you can assign the Continuous Controller (MIDI CC) to various other options than panning so the Panning Wave has more uses. Simply tap on the number button to see your choices.



outputUse the **Output** selector to choose which type of output is desired for this track.

The **Harmony** selector allows you to add up to 2 additional harmony notes to each track, based on the current scale. Keep in mind this will use more CPU so slower devices may bog down. **Harmony Style** below changes which harmony note is on bottom or randomizes on last one for an interesting change.

Play Styles



When editing the Note, Rest or Tie Waves, the Play Style option appears. Depending on which wave type you are on it has the following effects:

Note: Style **A** will let samples finish playing, even though new notes are played, except for rests where they are turned off by default. Style **B** will turn off the last note on the track whenever new notes are triggered.

Rest: Style **A** will cut off sounds upon entering the rest. Style **B** will let sounds finish playing but no new sounds will trigger during the rest.

Tie: When the last note is not the same as the new note, Style **A** will allow the note to play even if Tie is active. Style **B** will honor the Ties even though notes are changing. This has no effect if the notes are the same in which case normal tie behavior occurs.

Beat and Dynamics: See respective Section.

Scrolling Note Display Settings

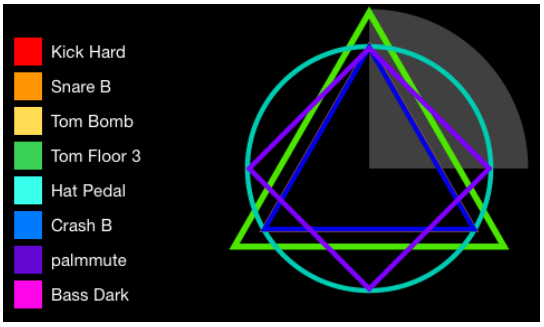


The Scrolling Note Display at the top is a convenient way to see what is being played. However, it comes at a cost on the CPU so there are times where audio should be given full CPU time for best performance. Pause the scroller for the best possible performance, especially if you have a lot of voices turned on. Different Drummer does all its calculations in real-time so this can be important.

There are four modes of operation, some with more tax on the CPU than others:

- **Beat Display** shows just the current beat and a play cursor shows the notes that are triggered where larger circles indicate higher velocity based on the dynamics wave.
- **Measure/Beat Rhythm Display** shows a pure rhythm view of the measure being played, essentially only showing you wherethe rests are. To show more information could cause too much overhead so this was settled on as a compromise.
- **Scrolling Note Display** shows actual notes played and the measures that have played scrolling to the left with new notes appearing at the right.
- **Interval Visualizer** where musical intervals relative to the current key are shown as follows:

m2nd: radius	**2nd:** diameter	**m3rd:** triangle	**3rd:** diamond
4th: pentagon	**m5th:** hexagon	**5th:** septagon	**m6th:** octagon
6th: nonagon	**m7th:** decagon	**7th:** hendecagon	**root:** circle



Beats are shown in this mode as sectors of the circle, depending on time signature.



The Beat Indicator Setting lets you choose quarter, eighth and sixteenth notes respectively to show in the Beat displays.

While scrolling is turned on, the current measure number is displayed top center where the Different Drummer label resides.

Operations



Tapping the gear icon brings up the Operations Panel which gives you some handy functions that can be applied to a group of selected **Destination** waves. Tap to toggle Destinations and use the Stepper to change the source wave.

Use the **Scope Selector** to determine which wave type you want to affect, default is ALL.

Certain opertions act upon the source wave and then map the result into the destination waves such as Clone and Cannon.

Most operations have settings to the right that you first set and then tap the Operation Button on the left to perform the operation as follows:

Revert restores the set to what it was when the Panel first came up.

Clone makes an exact copy of the Source Wave to the Destinations, except for the voice.

Normalize sets the destination waves to have normal frequencies sort of like hitting the number buttons in the Wave Panel.

Cannon clones the source wave, then offsets the copies by the amount selected to the right. When ordered is set, they are offset in sequence from left to right of your destinations. When turned off, they will randomly shift by the ammount selected.

Separate changes the *vertical* positions of the Note Waves to make them harmonize if they were cloned or to get more tonal separation

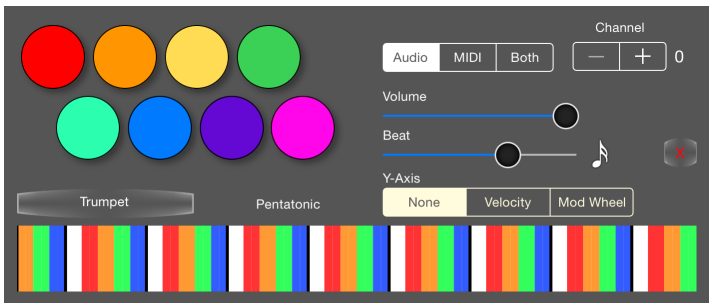
Rangify sets the Note Range contrls for each voice which can help to separate them on output regardless of other settings. Experiment with the different options to see the results.

Flatten resets the wave to its zero positions.

You can combine operations and turn off destinations to create interesting variations that affect certain voices and not others.

REMEMBER: Nothing happens until you tap one of the buttons on the left!

The Jammer



The pads on the upper left simply play the sound that is assigned to that color wave. The note played is Middle C or whatever key you are in. You can force lower octaves using the range control or force a single note by setting low and high range to the same value. While your finger is down, the main DD voice will be masked out and not play to avoid clashes.

The **Output**, **Volume**, **Beat** and **Y-axis** controls only apply to the dynamic Jammer keyboard at bottom.

The Jammer has it's own track and voice which is currently limited to GM sounds.

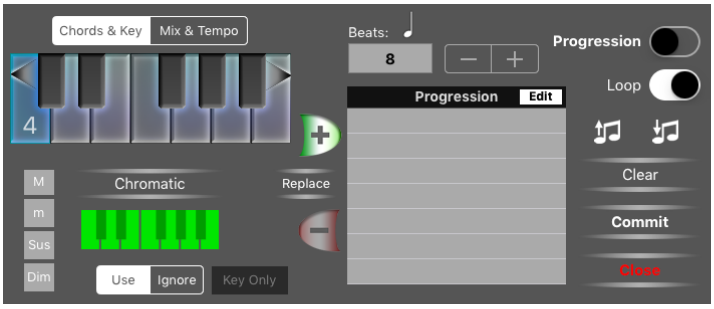
The keyboard reflects the current global scale by mapping colors to intervals where white represents the tonic pitch of the key. Black lines indicate octaves. Since some scales expand faster than others, the keyboard may go from having large keys to small keys. A future version will control this better.

Composing Progressions



Tapping this icon in the Scrolling Section up top next to the piano icon brings up the Progression Composer. Progressions allow you to automatically change key, scale, tempo, mix and phaser after a specified number of beats.

Switch between Chords & Keys and Mix & Tempo up top to access the settings needed. Use/Ignore determines whether the event will use the setting of that



type because sometimes you just want to change the Mix without caring about the Chords.

Select the desired Key using the Piano Control. You can move to different octaves using the arrows on either end. The **Key Only** toggle will cause DD to ignore the Scale setting so you could manually change scales and the progression would not override you.

Then select the desired **Scale**, **Chord** or Mode from the list on the left. When a scale is selected, the notes of that scale in the current key are highlighted in green on the tiny keyboard at bottom.



Use the small Event Mixer to turn up or down tracks at the event time desired. You can also change Tempo or Toggle Phaser at the same time.

IMPORTANT: If you are Looping your progression and changing mix and tempo, etc. you should add the starting settings also to the first event so they get reset.

Set how many beats you want it to last using the stepper next to the **Beats** field. Beats are equivalent to quarter notes.

Finally, use the green Plus button to add it to your Progression List. Progression will be turned on once you do this but it won't effect your current preset until you tap Save.

If you make a mistake or change your mind you can use the **Replace** button to change a selection.

Repeat this process as many times as you want to build up a progression.

Loop will cause the progression to repeat endlessly or when off will stop play after going through once.

You can Copy progressions to other presets by tapping the notes icon with the upward arrow and then paste by tapping the one with a downward arrow.

Tap **Clear** to reset the progression. You can remove specific selected chord changes using the red Minus button.

To change the order of progression changes, tap **Edit** on the list and drag items around where you want them and then tap Done to finish.

Tap **Close** to exit the composer.

Tap **Commit** to assign the progression to your current preset which will be saved if you save the preset.

You should restart playback to begin your progression properly at the correct beat.

All progression chord changes are global, currently, so all voices will be affected at once. Progressions begin upon tapping play.

To exclude a voice from Key or Scale changes, turn on the Lock for that voice. Locked voices will use the last manually selected Key and Scale and this info is saved with the preset.

A Note About Presets and the Future

Presets consist of a file that stores your saved settings and any samples you may have included. Keep in mind that even though we try to make sure presets will play exactly the same way as they did when created, it is possible, over time, for algorithms to slightly change (due to fixed bugs, iOS changes, deleted samples or additional abilities) so older presets *may* not sound excatly the same even if off by a tiny amount. It's almost impossible to maintain perfect backwards compatibility with this type of algorithmic method. That said, we will only alter algorithms when it is absolutely necessary and we recommend recording loops or standard MIDI files for those presets that you are most fond up to preserve them as they were.

Copy and Paste

In most cases, to duplicate the settings from one track to another, first tap the Copy Wave button (arrow going up). Then select another track using the Wave Selectors and Paste with the other button. However, when in Grid Mode, *and on the Note Wave*, it works differently. Here it will only copy one measure of your pattern so you can copy it to other measures by using the Plus and Minus navigators.

Undo and Redo



For many changes you can perform to a wave, including randomization and amplitude changes, Different Drummer first captures the current state so you can usually undo your last change by tapping the left arrow. Inversely, you can then restore back to the changed version by tapping Redo. This can be useful for comparing two settings.

Zoom and Navigate



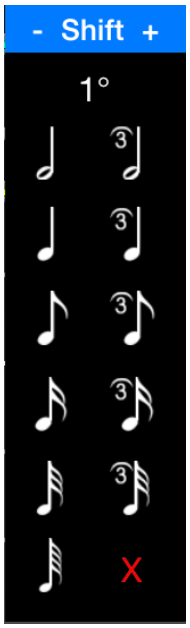
Tapping these *while in Wave Mode* will allow you to zoom in or out on your pattern to see how it looks over more measures (up to 16). *When in Grid Mode* these buttons change functionality to allow you to step through measures of your grid pattern.

Phase Control Tools



Tap the **Phase Label** to reset phase to **Zero**.

Tap the **Number** to manually enter a value.



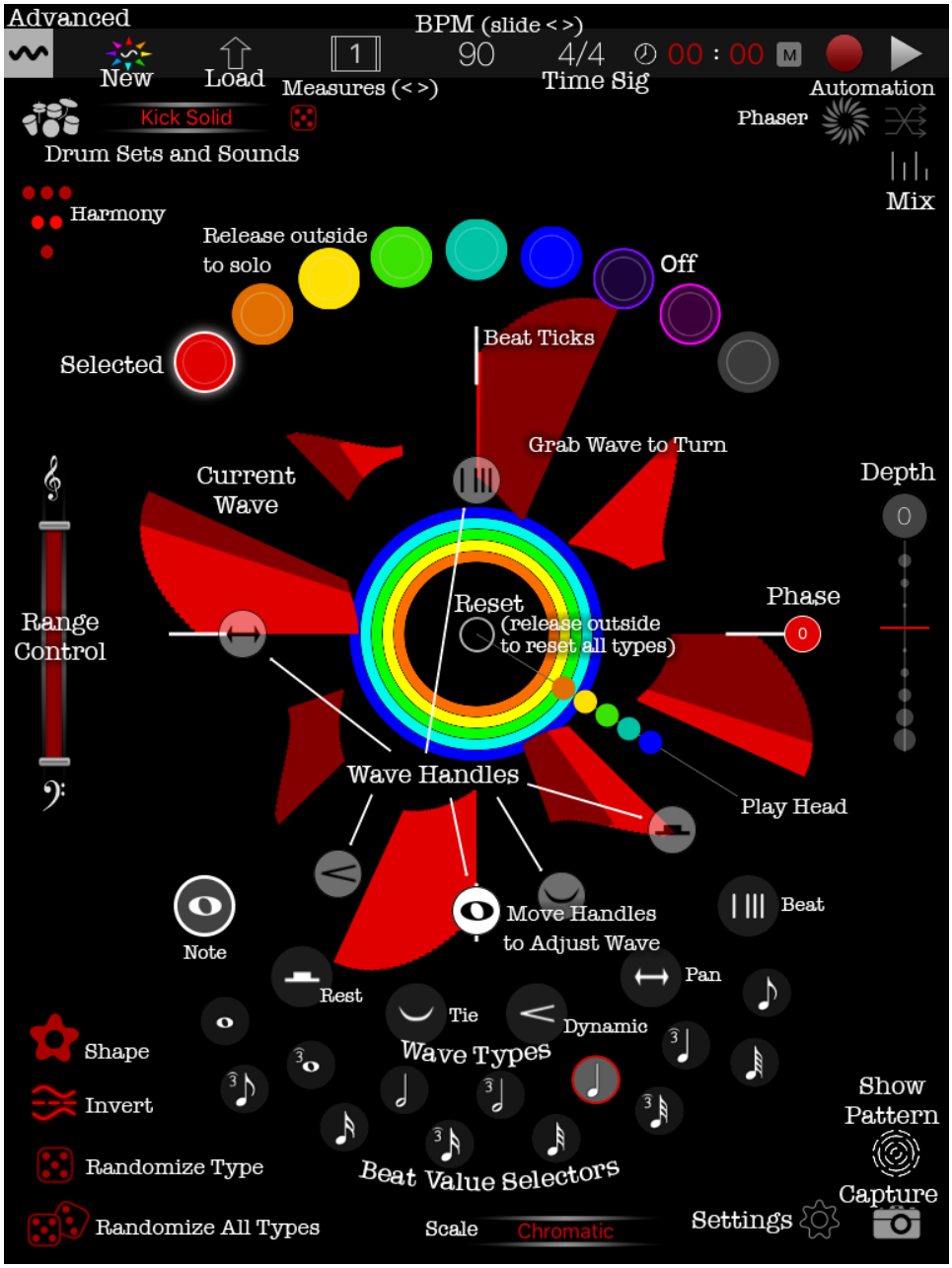
Tap the **Note Icon** to bring up the **Shift Selector**. Select the desired value from the available choices, the smallest of which is the default 1° value. Once set, the Note icon will change to the value you selected and then whenever you tap the + or the - buttons, the phase will be shifted by exactly that amount. The Red X will close the selector with no changes.

Phase has a drastic effect on any of the waves because it moves the wave left and right. Phase values perfectly correspond to beat values since all waves are expressed in Cycles Per Measure and degrees represent precise divisions of a measure just like note duration values:

Degrees	Note Value
360°	Whole
180°	Half
120°	Half Triplet
90°	Quarter
60°	Quarter Triplet
45°	Eighth
30°	Eighth Triplet
22.5°	Sixteenth
15°	Sixteenth Triplet
11.25°	Thirty-second
7.5°	32nd Triplet
5.625°	Sixty-fourth
1°	1/360th measure

The Zenterface

New to version 4, the Zenterface offers a new way to interact with the wave parameters. Instead of the Amplitude and CPM controls, you drag the white Wave Handles around the circle to change the CPM and move in and out to change amplitude.



Unlike the Advanced Mode of operation, the Zenterface works on the basis of a fixed pattern length for all the waves as indecated by the Measure Control up top. Drag Left and right to set the length of the pattern.

Another current limitation of the Zenterface is you are only controlling the 1*f* Amplitude and don't really have access to the other Partials. However at any time, you can switch into the other screen and add and adjust those components.

As you slide around the circle, you will notice it "snaps" to certain numbers that create exact divisions of the circle.

Tap the center Circle Reset button to return the current wave type to it's flat (reset) position.

You can rotate the shape by touching outside a button and dragging your finger. This is actually just changing the Pase value which you can also do by dragging the small Phase Button on the edge.

The Depth Control on the right is really the same as the Y-Control in the other screen but since it's a circle there really isn't a "Y" so I call it depth.

If one of the Wave Handles covers up another that you want to get to, simply tap the bigger Wave Type button at the bottom of the circle to bring it to front.

The radial pattern in the center is really just for reference so you can see where you are relative to other voices but you can also hise that using the Pattern Toggle at the lower right.

Save work by tapping the Capture Button at lower right. You can go name it in the Preset Manager of the Main Screen.

If you start a new Wave Set in the Zenterface, the voices are by default set to Unquantized for maximum intuitiveness. You may experience slight differences when switching between screens since the Zenterface has limitation imposed but you can also change those in the other screen and may end up with some settings that can't be accessed in the Zenterface.

This is Zenterface 1.0 so expect it to evolve over time!

The Zen Phaser (IAP)

New to version 4.1, the Phaser is a new way to automate musical changes in Different Drummer. Essentially, all it does is gradually change the phase of selected wave types. What makes it especially powerful is the fact that each voice has six control waves and each one of these can be independently automated giving you altogether 48 additional options for automation!

Tap the Phaser button to bring up the **Phaser Settings**.



Use the switch to toggle the Phaser on and off then at the bottom tap to toggle which wave types for the current wave you want to automate. They will be darkened when off and lightened when on. One of them will have an additional white border to indicate it is the currently selected Wave Type which is set as soon as you tap one of them. You can also change this by using one of the other two Wave Type selectors on the screen.

The settings will change to the ones stored for the given voice and wave type. The color tinting will indicate which voice you are affecting.

CW and **CWW** stand for Clockwise and Counterclockwise respectively. This determins the direction that the “flower” will spin when the Phaser is on. Each Wave Type can have its own direction.

Depth indicates how much the phase will change on a given time interval which is determined by the **Speed**. The two of these together will determine the final rate of change applied.

Reset will set the Phaser back to its defaults of all Types off and set to slowest speed for ALL voices.

When you start the Phaser it stores your current Phase settings and when you turn it off, they are restored so you don’t actually change your Wave Settings.

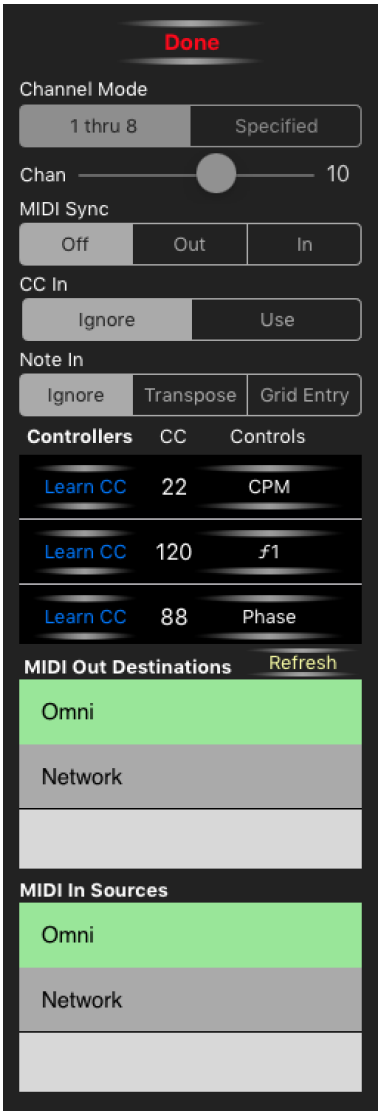
The Phaser will suspend itself when you switch into Advanced Mode where it is not currently supported but will resume upon reentry to the Zenterface.

Phaser settings are not currently saved with your Preset but are stored as defaults.

To hide the Phaser Settings, tap the Phaser button again.

NOTE: When set to highest speed it looks coolest but it is also significantly more taxing on the CPU and may cause degradation of performance so we suggest that you don’t overdo it most of the time, epecially if you are sharing the CPU with other audio apps.

MIDI Settings



Called up from the main Settings Panel, this is where you can refine your MIDI behavior.

Channel Mode: Select how you want MIDI channels sent; either 1 thru 8 corresponding to the waves or Specified where all output goes to one channel. When 1 thru 8 is selected the Out Channel Slider will be disabled.

Out Channel Slider: Controls the channel to use for single channel output.

Send/Receive MIDI Sync: Determines if MIDI Sync is sent 24 times per Quarter Note (master) or received (slave). It also enables/disables the Start/Stop Sequence MIDI signal. MidiBridge app is recommended for best results when receiving Midi.

CC In determines whether incoming Continuous Controll (CC) events are to be processed or ignored. If they are processed, an attempt will be made to map them to the Controllers list lower down.

Note In determines what Different Drummer will do when it receives a Note On event. If set to **Transpose**, the external keyboard becomes the same thing as the little popup keyboard in Different Drummer. Be aware, if the external synth is also set to receive from DD and has MIDI Through turned on, it can create a feedback loop where each note played then transposes each note played, etc. so you may want to prevent that unless you just want to hear the chaos.

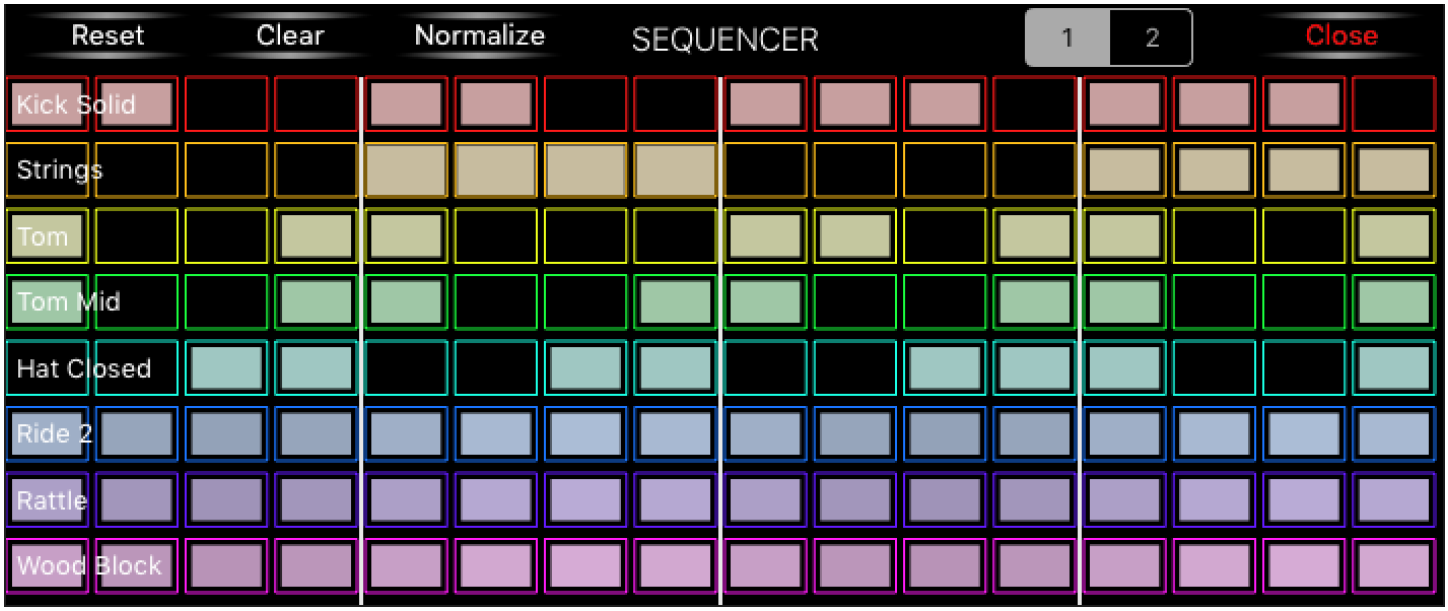
If you are in Grid Mode then the **Grid Entry** will cause new notes to be added to the grid from the last place touched. This will be improved in the future to catch the timing but for now only the notes are captured.

Controllers is a list of up to 10 separate CC controllers that Different Drummer can learn to control various parameters. Tap Learn and then adjust the control on the external app/device. The CC column should now show you the number of the controller received which is then stored. Then select what you want to control by tapping the right button in the Control column. From then on, if CC Use is turned on, DD will adjust that parameter accordingly when receiving that CC event.

MIDI Out Destinations and Sources should display a list of all MIDI interfaces DD can see. Simply select which ones you wish to send or receive to/from or select Omni to send or receive to/from all. These settings are stored.

Tap **Refresh** to force DD to re-evaluate the system for current list of active devices.

The Step Sequencer





Tapping this icon brings up an alternate view of the Grid Mode. When you first tap this, any voices that are not in grid mode will be switched to grid with a loop length set to 1 or 2 measures and all voices are set to the same beat value so they align. You can then turn off grid mode on specific voices and the line will appear blank in the sequencer to indicate “off grid.”

Rows are color coded according to your current color scheme. A filled rectangle indicates “on” and blank is “off.” The brightness indicates the velocity of the hit and can be adjusted with the dynamics wave or using the manual Grid Editor below. When the fill goes to the edge of the box it indicates a tied note and will sustain the note from the previous box. Otherwise it will be untied. Note values are not indicated but still apply in Step Sequence mode. In fact all parameters apply that apply in Grid Mode. However certain ones that change beat value on grid type voices will switch all voices at once. If you want to free your self from this restriction, close the sequencer and use the Grid Editor as normal. Your sequence will be preserved.

If you turn off a grid for a voice and then save the Preset. When you reload the preset, that voice will be preserved as saved.

Reset restores the changes you have made to the state of the preset when you opened the sequencer.

Clear will set everything in the current voice to a rest. If you release outside the Clear button all the boxes will be filled instead of cleared.

Normalize will set all the notes to Middle C and untie the notes.

The **[1 | 2]** selector changes it between a one measure pattern to a two measure pattern.

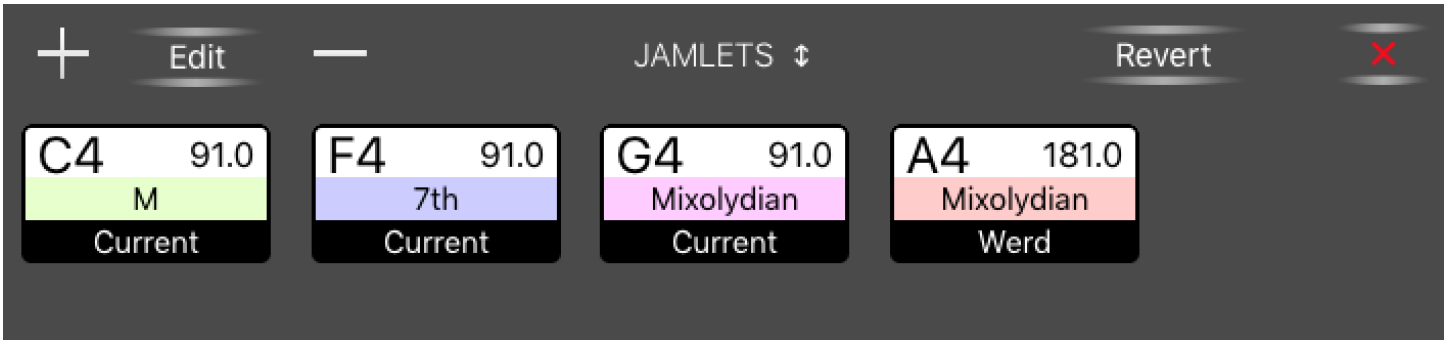
You can toggle boxes by tapping on them or dragging in the sequencer.

Changing beat value while in the sequencer will change all voices to keep them aligned. Certain beat values are off limits to keep the individual boxes from getting too small and those shorter values are less useful for this purpose anyway. You can always go to regular Grid Mode to use those.

The state of the Sequencer is saved with the preset so if you reload a preset that had it on, it will come back up showing the sequencer.

This feature will evolve to allow the build up of pattern sequences to be more useful.

Jamlets





Tapping this button will bring up the Jamlet Panel that can be slid up and down on the screen by dragging the title. This is a Live Performance enhancement that llows you to create a list of buttons that perform several changes at once including:

- Key
- Scale/Mode
- Tempo
- Mix
- Preset

To add a new Jamlet button, tap the **+** button and select the desired key on the keyboard similar to other places in the app. Select the desired Scale by tapping the Blue labeled button. Select a Preset to change to with the Green one or tap Current to set it to stay on the current preset that is playing.

Note that if you select other presets that have Jamlets stored, their jamlets will be ignored to keep the current set in place. Also, no instrument changes will take place (to keep timing tight) and the tempo and other setting of the Jamlet will override the preset ones.

If you change the mix on a Jamlet, make sure to have another Jamlet that restores the Mix if you need that. Or you can tap Revert which will restart play with the preset that was running before Jamlets were brought up.

Use the **BPM** Stepper to set desired Tempo for Jamlet.

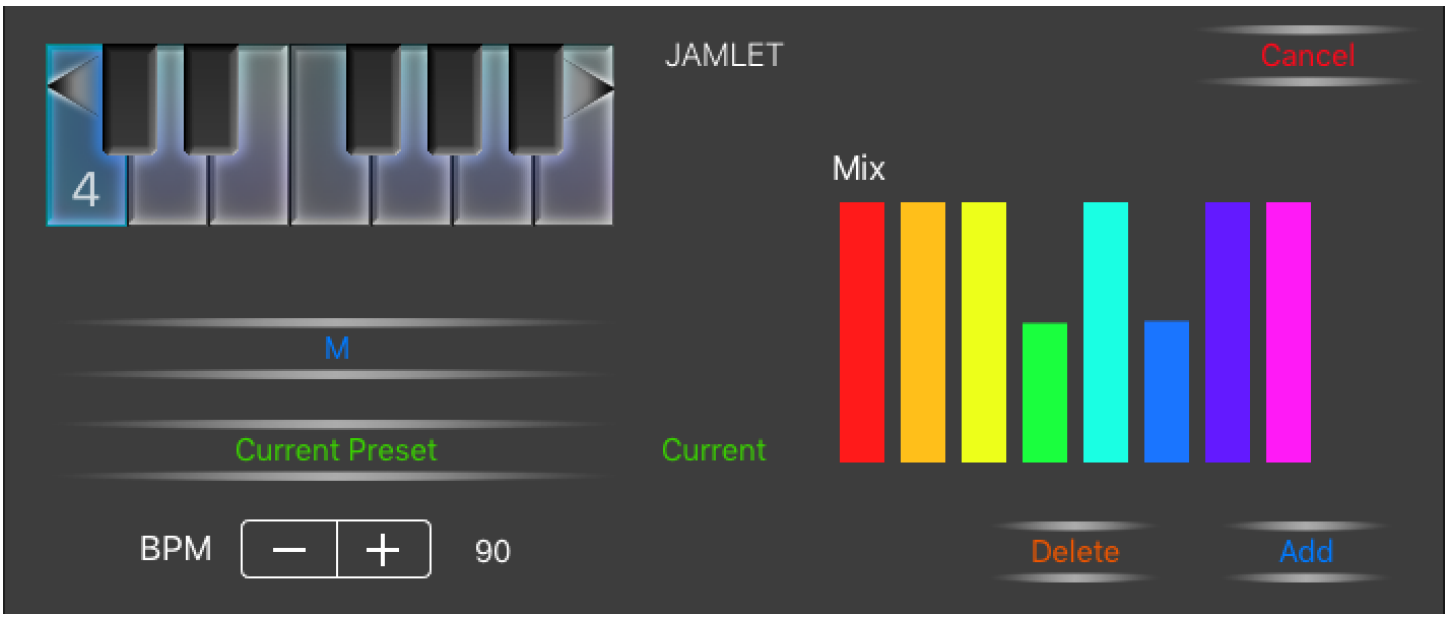
Tap **Add** to complete the insertion of the new jamlet to the list. Or tap **Delete** to remove it.

To **Edit** a Jamlet, first select it in the list and tap Edit. Adjust it as desired and tap Update.

To Delete a Jamlet, tap the **–** button with a Jamlet selected.

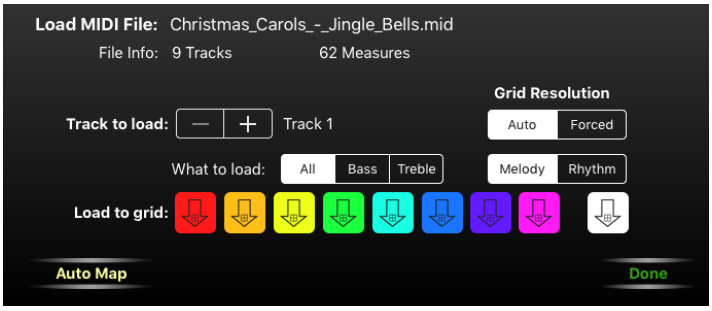
Currently, Jamlet changes take place immediately but in the future features to sync to beats and measures will be added.

Jamlets are saved with your Preset when you save or Snapshot it.



Importing MIDI Files

If you elect to open a MIDI file from a browser or via the Load MIDI File button in the Grid Panel, Different Drummer will attempt to read the file and display the MIDI File Mapper panel.



At the top you'll see a summary of what DD thinks is in the file including how many tracks and how many measures.

Since DD tracks are each monophonic, only one note per grid event can be captured also DD grids have a fixed resolution so it will attempt to find the nearest fit to the grid. If you use **Auto**, it will determine the smallest resolution to accomodate the track for you ore **Forced** will just hammer it into your current resolution—which can be cool too.

What to Load determines a bit about how DD will go about pulling in the notes to the grid. Bass will ignore notes above and including Middle C. Treble, the opposite. Melody cares about the actual note value (in Chromatic Scale) and Rhythm will make everything Middle C but keep the timing which can be great for getting a kick drum to line up with a bass line.

Once you have the Track to Load set and the setting you want, tap one of the colored **Load to Grid** buttons to send the data to the track or the white one to send to all tracks.

Auto Map performs a simple 1-to-1 mapping from the source file to corresponding DD tracks (wave voices).

IMPORTANT: Beware of long Midi Files! Different Drummer is NOT a Midi Sequence Editor and doesn't work anything like one. But it will store many, many events in the files it creates which can then get quite large and take longer to save and load. This could cause hiccups if you were for example including this in an ABA type composition.

Another thing to be aware of is Midi files have particular notes so DD is switched into Chromatic Scale for Midi Import purposes. You can override this but it will no longer play the notes as written.

Also, once the notes are in your Grid, if you use the Note Wave wave controls, it could rewrite the whole sequence. But the good news is, the Rest, Tie, Dynamics and other waves CAN be applied without effecting the notes and that's the cool part! We may have a feature that uses the Note Wave to *vary* the existing notes instead of rewriting them in the future.

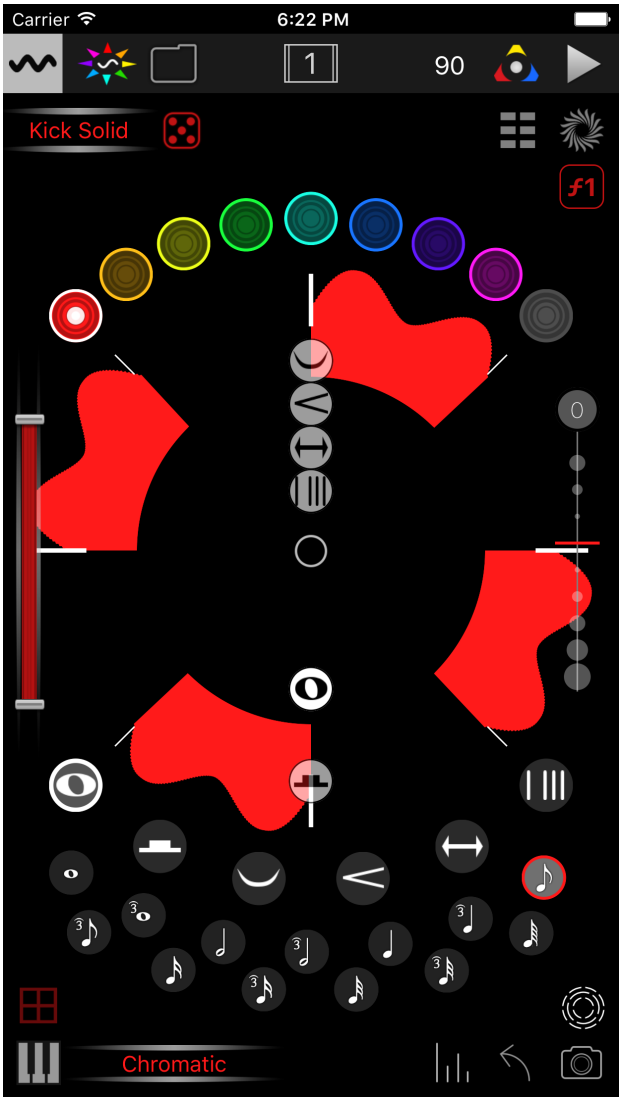
iPhone Version (and Split View)

Because of more limited screen space, the iPhone version currently only covers a subset of what the iPad version does and works a bit differently. Things **not** *currently* (but may be added eventually) supported on iPhone or *Narrow* Split View include:

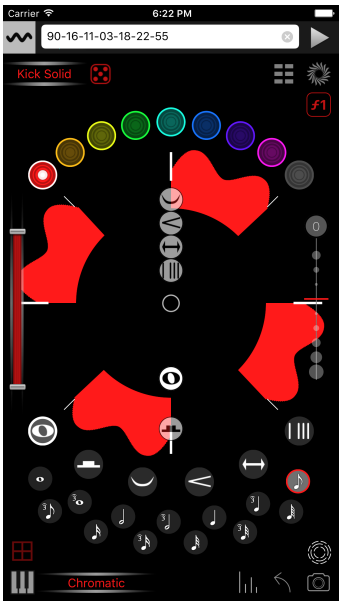
- Step Sequencer
- ABA Sequences
- Linear Grid Editing
- Jammer
- Scrolling note display
- Advanced Grid functions and MIDI import
- In-app Recording (use IIA or AB)
- Custom Drum Sets
- Automation controls

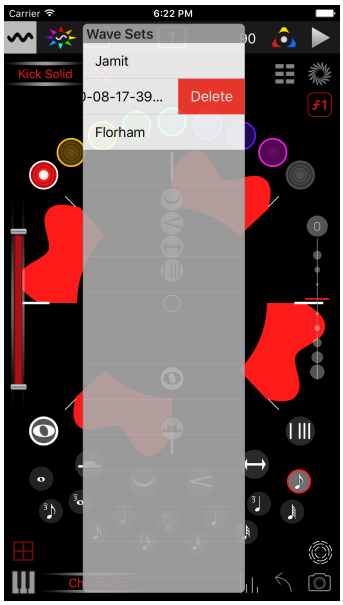
However, the iPhone version does some cool tricks not on the iPad so here's a quick rundown:

First, follow the Zenterface instructions for the main screen which is the default for iPhone:



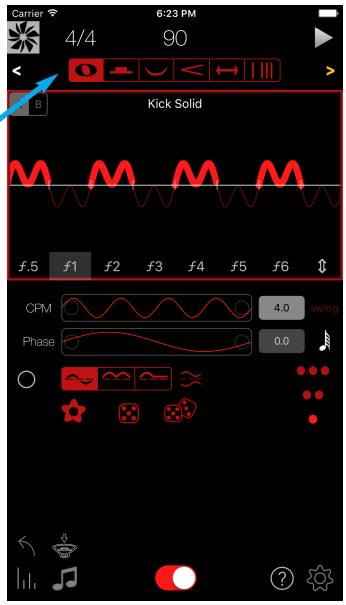
Then, to save presets, tap the camera icon and a text field appears up top. Just give it a name or hit go with the auto name or cancel by tapping outside the field. It will then appear in your preset dropdown.





Swipe on the dropdown menu to delete presets.

Then if you hit the Wave Control icon upper left you go to the Wave View:



Switch voices with the colored arrows up top.

Select Wave Type

Select which Partial to edit, *f* buttons and pan your finger up or down for what is the slider function (Amplitude Controls) on iPad.

Other controls should be familiar as described above.

The little AudioShare icon speaker thing will allow you to import samples to your sound list for later use, provided you have AudioShare.

You can compose chord Progressions by tapping the notes right below that.

More to come...have fun with the highly mobile version of DD!

Using Inter-App Audio and AudioBus

Different Drummer provides two type of sending audio to other apps running on your iPad: 1) AudioBus, a third party technology which is widely accepted as state-of-the-art for managing audio connections between apps and 2) Inter-app Audio which is a native Apple technology for connecting with apps that support it. It is only available on iOS7 or higher.

To use Audiobus, you first have to but the AudioBus app and then generally for best results launch AudioBus first with a minumum number of apps running to maximize CPU.

Different Drummer doesn't provide a UI for making connections to other apps via Inter-app Audio, but if they support inputs from other apps, those apps should provide a means of selecting the Source of Audio and Different Drummer should appear on the list as it does in GarageBand.

Once connected, the icon for the connected app will appear in the top bar near the Recording Counter. Pressing Record in this state will send a trigger to the connected host app to begin recording. Tapping the icon will transport you to the connected app. Only one host connction is supported.

This is a new feature so there may be unknown issues with some apps and it was only tested so far in GarageBand.

Best Sampling Practices

Some samples work better than others but in general stereo samples are a little tougher to get clean. Mono samples tend to play cleaner but are obviously lacking the dimension, though panning still applies. For best results give your stereo samples a bit of extra silence at the end or make them longer. This can often eliminate annoying little pops that can be heard at certain frequencies. Also, Play Styles can have a big influence. For example some samples sound better when you allow them to completely play and don't sound right when they are clipped with a normal Note Off. Try Note style A and Rest Style B for full samples in all cases.

Troubleshooting

Voice Not Playing
The most common cause of a voice not playing is the wave settings themselves. Everything that plays has to meet certain conditions in order for a given note to have "permission" to play. Just because it appears in the Wave View or the Scrolling Display doesn't guarantee this condition is met, especially when "Quantize" is on. The internal "beat clock" is like the Master Grid that everything is checked against and there are times when your settings just happen to not line up with the clock. The longer the Beat Value, the simpler the wave should get to accommodate. If you are trying to play half notes when your wave is complex the "go" moment for your notes may not correspond to the half note go moments. Try either simplifying the wave or speeding up the beat value or turn of the Quantize for that wave.

Notes that are tied will only play once at the beginning and can often not get played, especially if they are of longer beat values.

Rest and Tie Waves, Beat Value and Quantize have the most effect on whether you will hear notes or not.

No Sound at All
Make sure your mute switch is not on if you don't have a headphone jack plugged in. Also, check your sound settings in the Settings of your iPad. Sorry, if the audio is a little soft when playing on the iPad speakers, we'll try to improve that but we certainly recommend speakers or headphones that can do justice to the booming bass of the drums. In fact be careful not to turn it up too loud if your speakers are not ready for prime time!

If a voice drops out after the app is dormant for a prolonged period, you may have to restart the app. You can also restart the sampler by tapping the Reset Audio button in the Settings Panel. Also check to see if your voice has been turned down in the Mixer or if you have turned off Audio Out in the Settings Panel.

Better Performance
Make sure to quit unnecessary apps that are running on your device to free up as many resources as possible. Try tapping the little pause button for the scrolling graphic which can improve performance, especially when all voices are playing. Unlike other types of drum machines, this one is a real-time gen-

erator and so it is sensitive to other things that hog up the CPU though we have tried to optimize it.

If you are experiencing glitchy sound with Audiobus, try switching to the 512 frames setting in Audiobus. Also, check to see if you have channel effects applied as sometimes these can use more CPU cycles than are really available. Turn some or all of them off for best performance.

TIP: You can free up some CPU cycles by turning off the Play Cursor in the Settings Panel. This can actually boost performance by 20%!

If audio get's **glitchy**, you are probably overloading the CPU. Reduce voices, harmony, effects or graphics. When loading new presets while playing, the audio engine may glitch while new sounds are being loaded if it takes too long. ***For ABA sequences, it's best to have matching sound sets to avoid this.***

Finally, nothing performs like the latest iPads so if you have an old iPad it may be up to 8 times less powerful in processing power than an iPad Air which means Different Drummer can get all its calculations done in fewer milliseconds with time to spare. We've noticed a distinct difference between even iPad 3 and 4 so between 3 and Air...well you get the picture.

Application Quits
iPad shares limited resources among all apps so the more apps you have running, the less to share. iOS looks for apps that are not in use and sometimes makes a decision to jettison them to free up memory so they are essentially killed. That is the most common cause of Different Drummer quitting. To mitigate this, start fresh, run the bare minimum of apps and don't leave it in the background unused too long.

Problems with MIDI Sync
When MIDI sync is enabled Different Drummer will send out an accurate MIDI Clock for other apps. If you want to start Different Drummer from another app, it's best to make sure DD is playing when you exit the app to make sure it's still "alive." You may then stop it with the other app and start it when needed.

Sharing Presets and Ownership of Your Work
It is our position that presets and recordings you create with Different Drummer belong to you, especially for artistic purposes and the only thing we don't allow is for you to create a business selling Recorded Presets as drum loops in a way that would undermine our sales, which is unlikely.

Keep in mind however, when you decide to Publically Share your presets, those become public domain, including any samples you provide. "Public" in this case only means other DD users since it's a closed community. We don't prevent users from modifying your presets or even creating new ones using your samples so share presets in the true spirit of creativity and hopefully enjoy how your presets can be altered as cool variations. When you Tap New, your identity is stored in the preset and that can not be altered so we will try to maintain a thread to the originator in future versions.

Also, if you delete a preset from the community, this will have no effect on copies that may have been downloaded to other users devices.

Tech Support
You can email support questions, suggestions, comments, etc. to:
support@technemedia.com

Credits

Different Drummer has evolved over many years in a natural process of refining ideas both internally and from our customers. We like to acknowledge these contributors both for their kind support of our product and their ideas and feedback that have served to improve it:

Michael McClard
Nick Trass
Florent Roux
Russell Bradley
Hermann Asakura
Mauro Sgrilla
Marlene DeGrood
Bianca Smith
Fabio Di Mauro
Joe Filbrun
Lee Stephenson
Ben Norland
David P Coffin

Different Drummer Apparel
You can deck yourself out in a cool DD T-shirt in the Zazzle Store HERE

Video Links

No doubt I need to do some more videos! In the mean time, you can learn a lot by watching some of these:

Older but show the same basic concepts...

Wave Overviews

https://www.youtube.com/watch?v=wKrJEEVwQgw
https://www.youtube.com/watch?v=VAou8sUxt3s
https://www.youtube.com/watch?v=gVniuaWjEsk

Sound Test Room (really old like 1.x)

https://www.youtube.com/watch?v=2fdApyKGoQk

Progressions

https://www.youtube.com/watch?v=olqeexOxaGw

Automation & Operations

https://www.youtube.com/watch?v=wcsMQJi-AKyk&feature=youtu.be

Grid Mode

https://www.youtube.com/watch?v=NmG9OFtqqhA

Newer but still slightly out of date...

Overview

https://www.youtube.com/watch?v=QKba4J4w2u4

Zenterface

https://www.youtube.com/watch?v=u7MUNKnljyc
https://www.youtube.com/watch?v=eWEGKMlvlq8

EDM

https://www.youtube.com/watch?v=ksgmK9MRbDg