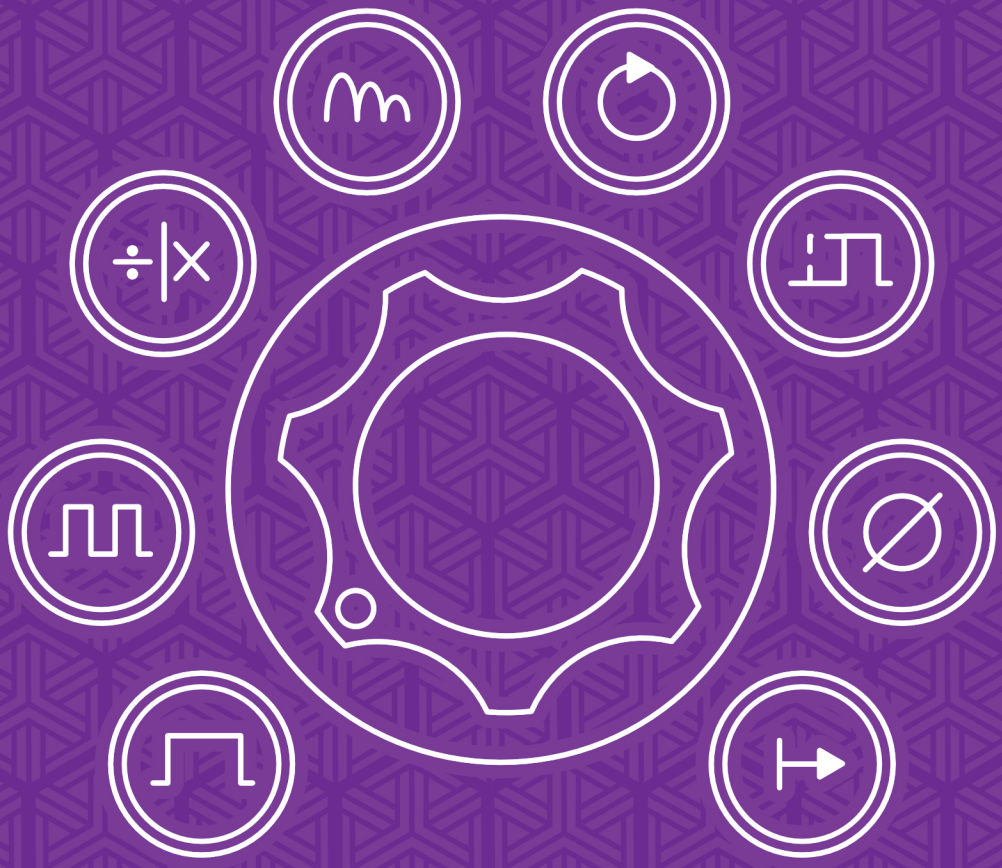
IDUM



IDM for people of average intelligence

MYSTIC circuits

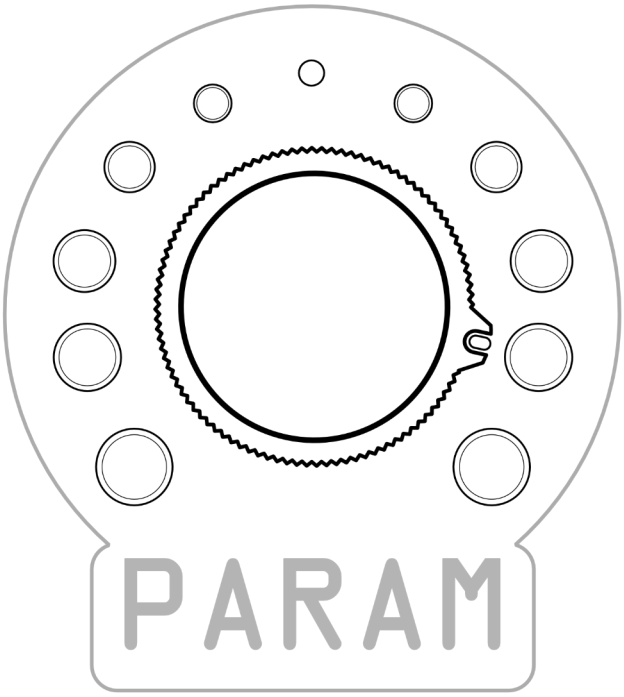
Contents

IDUM

Normally making complex electronic music with the modular requires either meticulous sequencing done in advance or a large ecosystem of modules. Unfortunately, the level of expertise needed to accomplish this is not accessible to the average modular user. IDUM aims to make this process easier and put Intelligent Dance Music, also known as IDM, into the hands of people with average intelligence. IDUM does not requiring much knowledge to get immediate and compelling results but with some extra familiarity this module can enable innovative music making techniques. Instead of generating musical patterns on its own, IDUM acts like an effects processor for the sequences that run through it. For example, a filter or a delay allows the user to alter the sound by twisting the knobs or modulating the parameters. Similarly, IDUM manipulates the actual gates and sequences of connected modules, but with a level of playability not normally accessible to a sequencer. IDUM can do anything from slightly varying carefully crafted sequences to turning your music into an onslaught of controlled chaos. Its open source code and hardware based on the beginner friendly Arduino Nano encourage users to tweak their modules to taste or to add new features all while ensuring future improvements as IDUM makes its way into the wild.

www.mysticcircuits.com

OVERVIEW



INSTALLATION

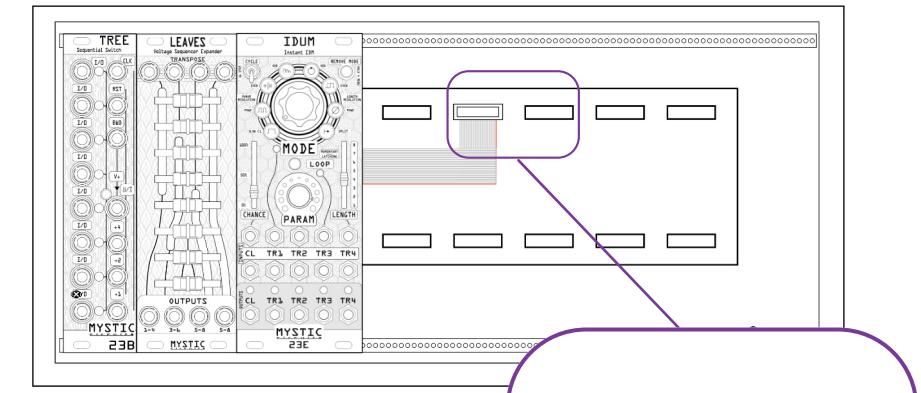
Follow the installation instructions carefully to avoid module or rack damage.

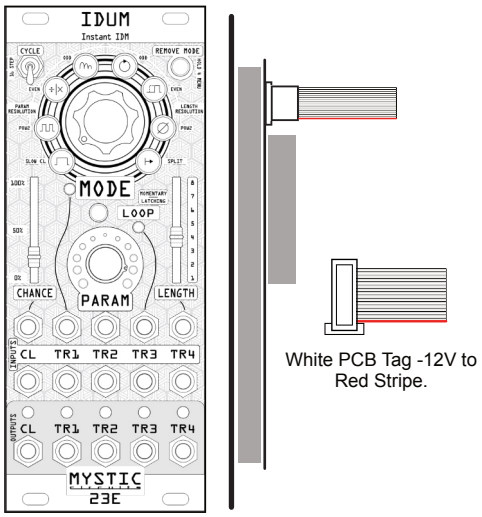
1. Ensure the power connection is disconnected before installing the device.
2. Identify 10HP of free rack space in which to install the module.
3. Connect the 10 pin connector from the IDC ribbon power cable to the header on the rear side of the module by aligning correctly with the red stripe on the ribbon conductor nearest to the -12V pin indicator on the header.
4. Insert the cable through the rack and connect the 16 pin side of the IDC ribbon cable to the rack power supply header. Ensure that the pins are aligned correctly with the red stripe on the ribbon conductor nearest to the -12V pin on the header.
5. Position the module into the dedicated rack position.
6. Attach the 4 x M3 screws by screwing into the 4 locator holes and the rack mount taking care to not over tighten the screws.
7. Turn on the power to the rack.
8. The module will start up and be ready to use.

Ensure the following conditions are correct for trouble free installation.

- Rack power supply can accommodate all of the installed modules total current ratings. IDUM Power requirements are +12V 50mA, -12V 50mA, +5V Not Used.
- Module power cable orientation is correct at both the rack and module side. Use the module supplied IDC ribbon cable.
- Ensure the rack earth / grounding is correct.
- Take care to avoid patch cables falling into the rack or touching module PCB’s

Eurorack Installation.



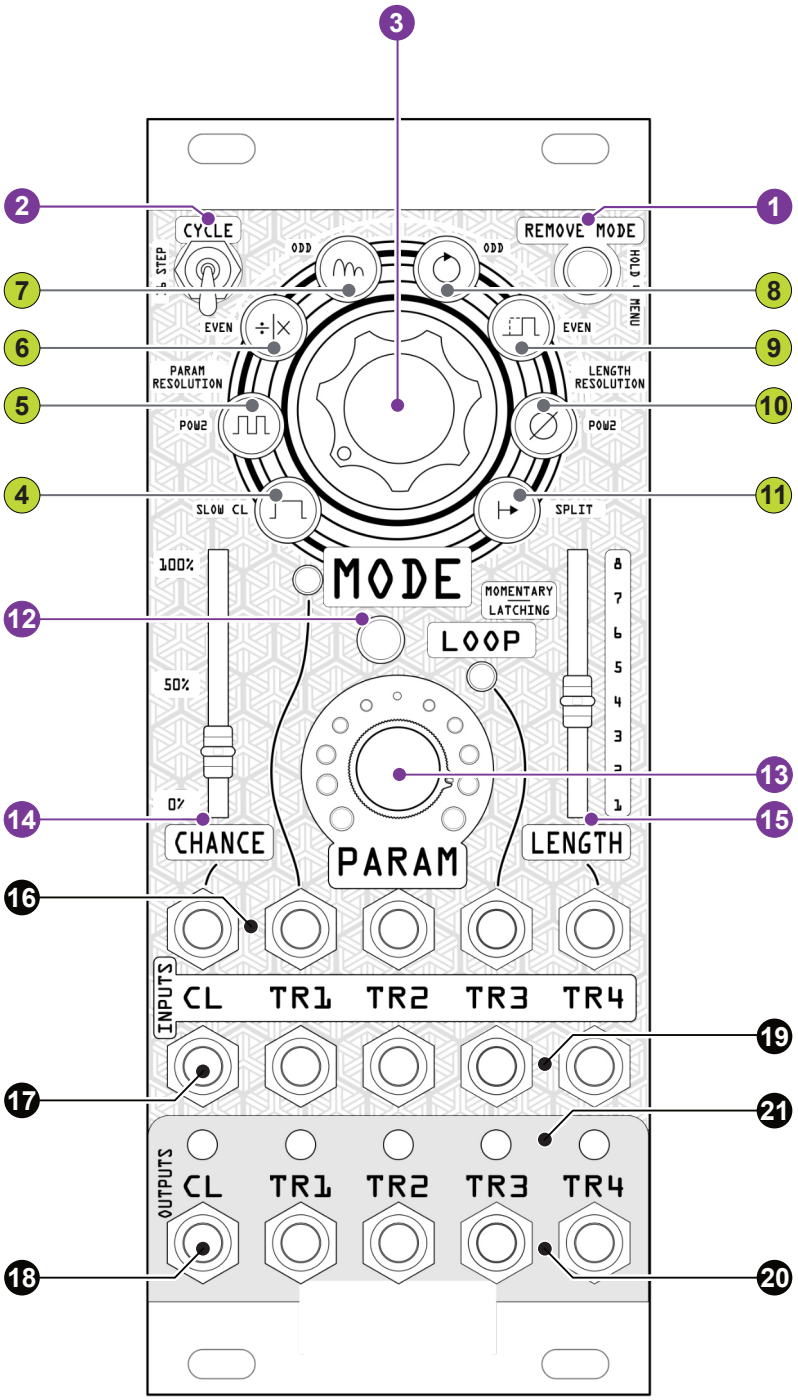


White PCB Tag -12V to Red Stripe.

Power cable should be connected to the PSU board and the module with the red conductor / edge aligned to the -12V pin. This should be labelled on the boards.

IDUM is supplied with;
1 x IDUM 10HP Module, 1 x Eurorack Power Ribbon Cable, 4 x M3 Screws and 1 x Quick Reference Guide. Full manual is available for download at www.mysticcircuits.com.

QUICK REFERENCE



Purple - Physical Control Green - Selectable Option Black - Physical I/O

1. REMOVE MODE button. Clear current mode. Long press to access setup options.
2. CYCLE Switch. Maintains original position of the sequencer plugged into clock output.
3. MODE Knob. Selection of modification effects. (2)
4. HOLD Mode option. Alters length of incoming triggers.
5. BURST Mode option. Burst generator activated by incoming triggers.
6. MULTIPLY/DIVIDE Mode option. Multiplies or divides the speed of incoming triggers.
7. BOUNCING BALL Mode option. Bouncing ball effect activated by incoming triggers.
8. ROTATE Mode option. Scrambles trigger input and output connections.
9. GATE DELAY Mode option. Delays incoming triggers by a variable amount.
10. BREAK Mode option. Preset rhythms influenced by incoming triggers.
11. SKIP Mode option. Manipulates the clock output.
12. LOOP mode button. Loops most recent 8 steps of activity. (1)
13. PARAM knob. Parameter selection relevant to each mode. (2)
14. CHANCE slider. Probability of modification occurring. (2)
15. LENGTH slider. Length of modification cycle or defined parameters. (2)
16. CV and Trigger inputs. Modulate and control chance, mode, param, length, loop.
17. Clock Input.
18. Clock Output.
19. Trigger Inputs. Typically from an external sequencer, LFO or gates.
20. Trigger Outputs. Pass triggers through unaffected or processed by the selected mode.
21. Input / Output LED indicators. Displays the trigger input and output status.

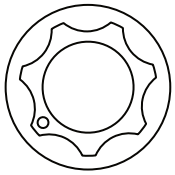
(1) Can also be controlled by external trigger as an option.
(2) Can also be controlled by external CV as an option.

GENERAL CONTROLS

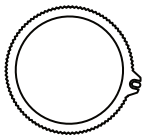
IDUM has 2 rotary controls, 2 selection buttons, 2 slider controls and a selection switch. These are used to control the available features and effects.

Buttons. Press / tap to select an option or long press to change function. The upper left button selection is used for the ‘REMOVE MODE’ Mode control (clear mode) and the central button to control the ‘LOOP’ function On or Off selection.

Sliders. Adjust up or down to make a selection across a range for the defined parameter. Left slider is used for the ‘CHANCE’ setting of probability (0-100%) and the right slider controls the ‘LENGTH’ values (1-8) for the specifically selected modification mode.



Large rotary. Turn clockwise / counter-clockwise for setting the active effect ‘MODE’ from one of the 8 available modifications. The selected mode is indicated by the associated LED which will illuminate brightly and allow editing by the sliders and param control. This is also used in loop mode to select start step and to manually ‘scrub’ the loop modifications.



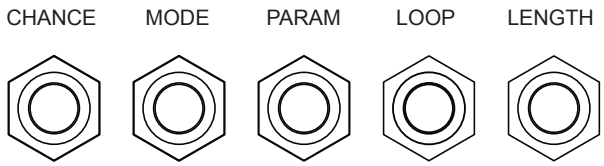
Small rotary. The ‘PARAM’ control is dependant on the current mode and selects one of the available parameters for the active modification effect. The available settings will vary depending on the modification mode selected.

Toggle switch. ‘CYCLE’ which is used to maintain the original sequence position of an external sequencer connected to the clock output after applying effects to the clock. Also will be used in future to set up 16 steps (not currently implemented)

Common TR LED’s illuminate to indicate the activity on the trigger input (lit blue) and the modified trigger outputs (lit red). Any unmodified outputs will show a pink lit LED.

INPUT / OUTPUT ASSIGNMENT

CV inputs can be applied to the IDUM for external control and modulation over the chance, mode, parameter and length functions. In addition an external trigger can control the loop function on and off. One CL - Clock and four TR - Trigger inputs are featured along with their modified output counterparts.



Modulation Inputs

	Format	Range	Description
Chance	+/- CV Input	0-5	External control over probability 0-100%
Mode	+/- CV Input	0-5	External control for mode selection
Param	+/- CV Input	0-5	External control over parameter setting
Loop	Trigger Input	0-5	External control for loop on/off
Length	+/- CV Input	0-5	External control over length 1-8

Clock / Trigger Inputs

	Format	Range	Description
CL	Clock Input	0-5	External Clock In
TR1	Trigger Input	0-5	External sequence trigger in
TR2	Trigger Input	0-5	External sequence trigger in
TR3	Trigger Input	0-5	External sequence trigger in
TR4	Trigger Input	0-5	External sequence trigger in

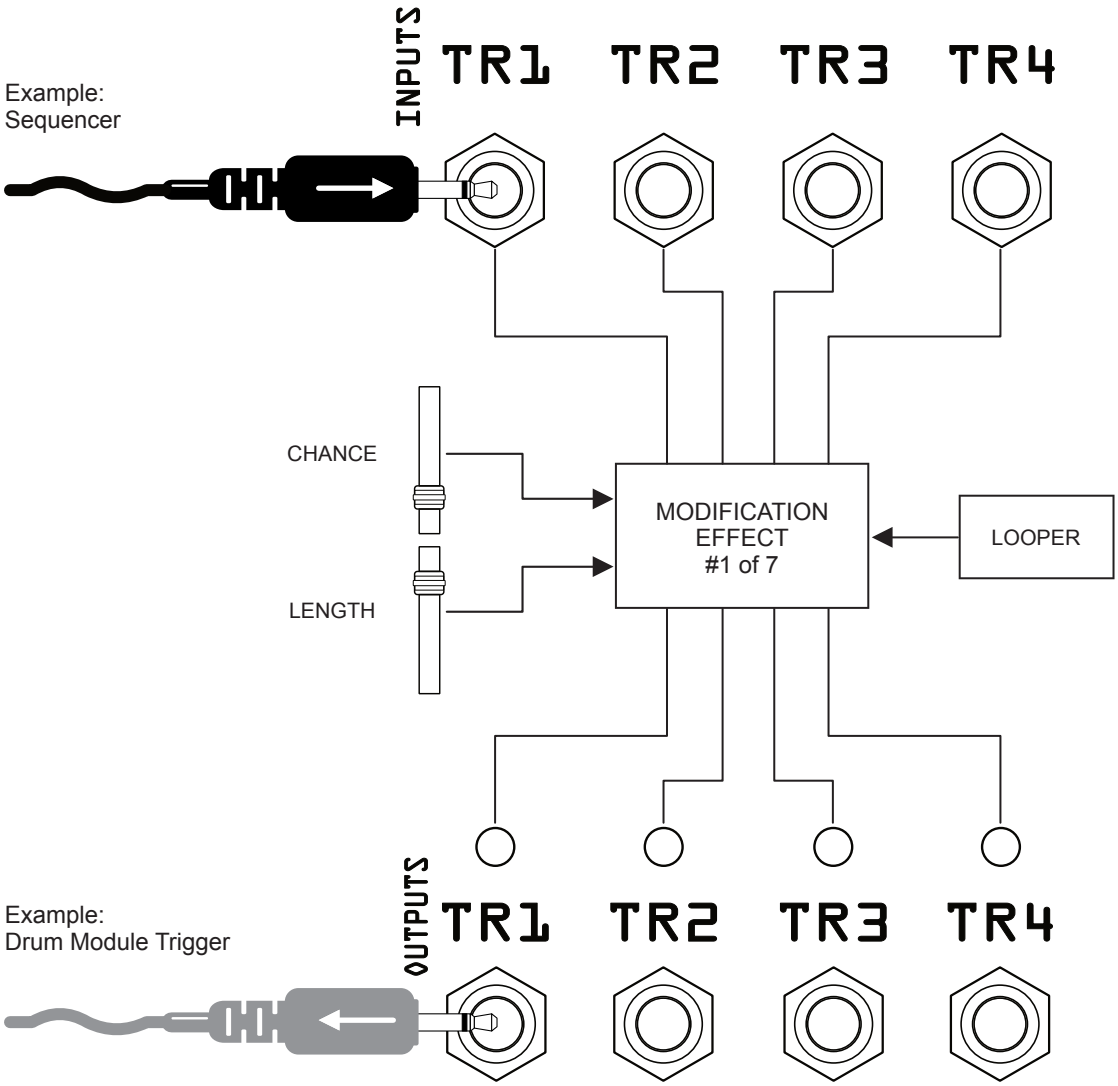
Clock / Trigger Outputs

	Format	Range	Description
CL	Clock Output	0-5	Modified clock output to external device
TR1	Trigger Output	0-5	Modified output to external device
TR2	Trigger Output	0-5	Modified output to external device
TR3	Trigger Output	0-5	Modified output to external device
TR4	Trigger Output	0-5	Modified output to external device

Note: trigger inputs activate at an approximate level of 1.8V. CV can accept +/- Voltages.

FUNCTIONAL OVERVIEW

IDUM has 4 trigger inputs which can be connected to an external gate source, typically a gate sequencer or LFO. The IDUM modification and on board effects are then applied to the gate signals before passing them to the outputs. This applies an effect to modify incoming sequences in a way that is playable with tactile controls in a similar way that an audio effect can be used to modify the signal of an audio source.



All of the triggers that are connected at the inputs are affected by the currently active modification effect and this affected signal is delivered to the outputs.

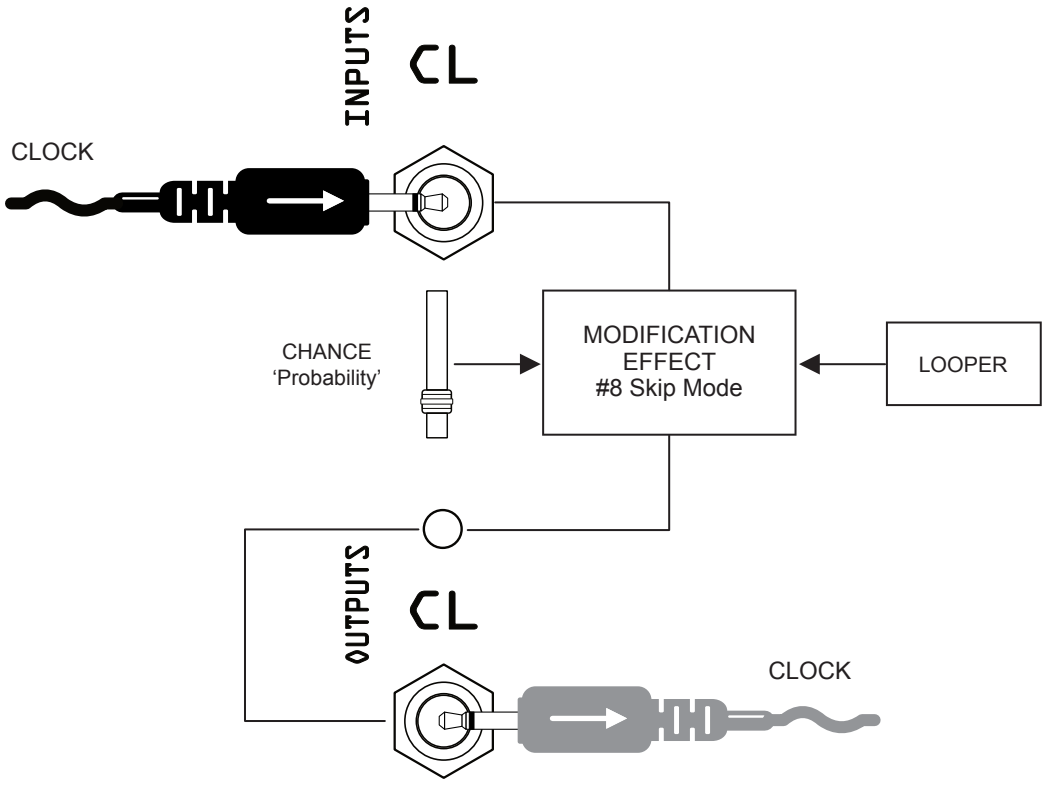
Input activity is indicated by the TR1 - TR4 channel LED's illuminated blue and output activity is indicated by the channel LED's illuminated red. Unmodified output LED is pink.

IDUM synchronizes to an external clock in order to activate modifications and produce bursts in time with the sequence. It also has a variety of modes that manipulate the incoming clock in order to change the speed and order of steps of whatever sequencer you have connected to IDUM's clock output. The normal function, will typically cause your external sequencer to drift out of sync with the original sequence. But when the CYCLE switch is in its upright position, IDUM will send out a burst of clocks at the end of every modification in order to catch up to its original sequencer position. This works better with some sequencers than others. Complex digital sequencers usually won't work as well with IDUM's clock manipulation features as a more fundamental analog sequencer. For optimum functionality we suggest using our Tree and Leaves voltage sequencing environment with IDUM.

CYCLE

Up. Maintains the original sequence position of sequencers connected to the clock output.

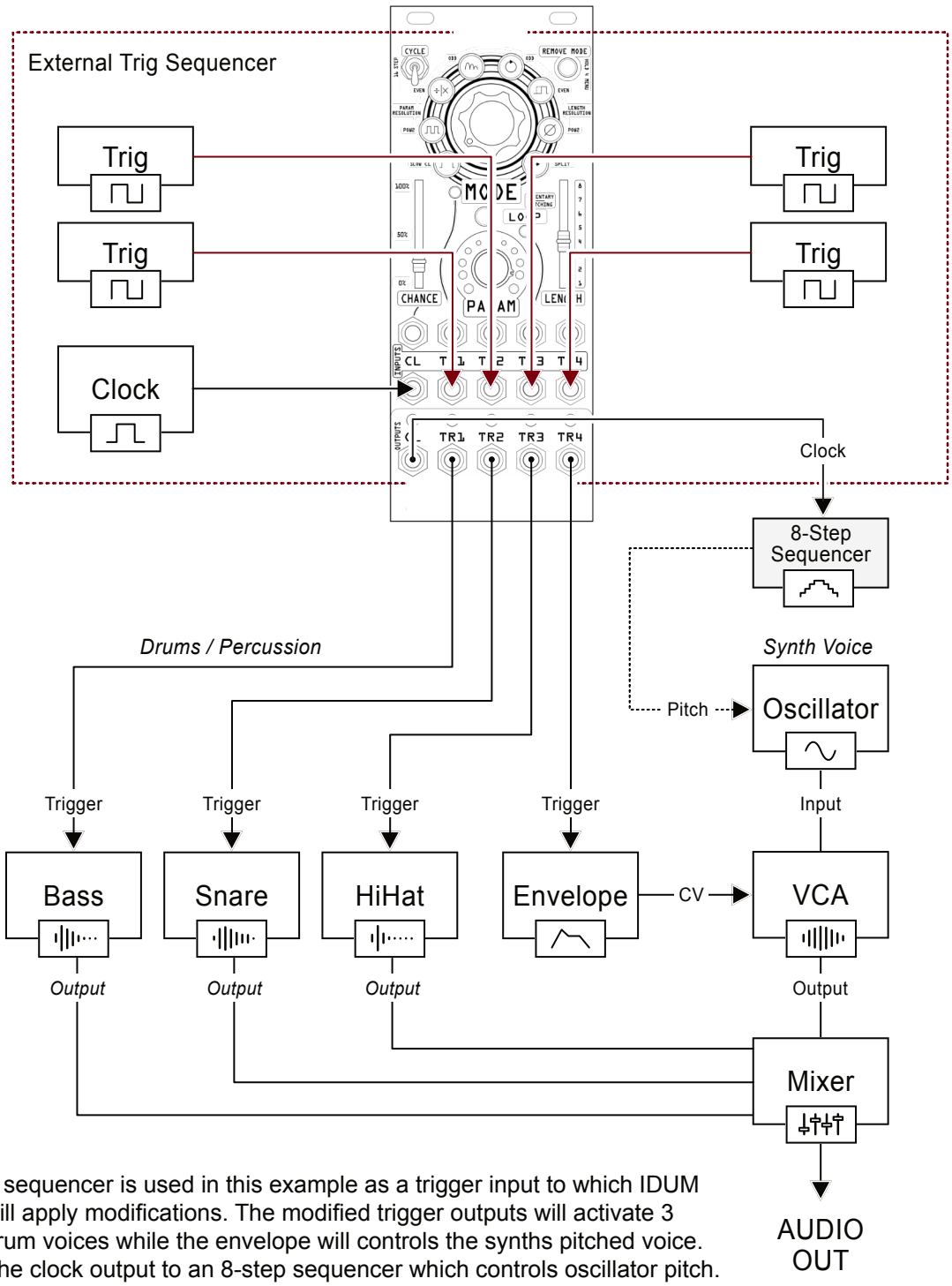
Down. Allows the connected sequencer to drift in position depending on each activated modification.



When selected as active, the external clock is affected by the 8th modification effect, skip mode. The clock will synchronise the modification engines and the clock output is available for patching. Cycle provides the option to synchronise the sequence to the external clock even when the output is being modified.

FIRST PATCH

To help speed up the learning curve with IDUM, a recommended first patch is shown. This is a good starting point and will help to demo the features as described in this manual. Other patches and configurations could also be used.



A sequencer is used in this example as a trigger input to which IDUM will apply modifications. The modified trigger outputs will activate 3 drum voices while the envelope will controls the synths pitched voice. The clock output to an 8-step sequencer which controls oscillator pitch.

GETTING STARTED

To learn about each mode effect on IDUM, it is good to start with the first patch described on the previous page and try out each mode by following along with the manual. However, all you need to use IDUM is a clock at the clock input and some sounds to plug the trigger outputs into. To start out: set the CHANCE slider all the way high, the LENGTH slider all the way low, and the PARAM knob at 12 o'clock. From here the MODE dial will select which of the effects is currently engaged:-

1. FIRST PATCH
Set up the first patch shown on the previous page or a patch that is as close as possible using the modules you have at your disposal

2. SELECT MODE.
Turn the large MODE rotary control to select the modification mode. The LED for the selected mode is bright, LED's for available modes are dim, and removed modes have no illumination. When a modification is active, only the LED for the selected mode will be illuminated. Modes are locked in once a modification activates and will only change at the end of each modification.

3. ADJUST PARAMETERS.
Adjust the PARAM knob to alter the behaviour of the active modification. The PARAM knob behaves differently depending on which mode is active. The functionality of the PARAM knob in each mode will be described in detail later on in the MODE section of the manual.

4. ADJUST CHANCE.
Adjust the CHANCE slider up or down to set the probability of the modification occurring. The choice to activate a modification happens whenever a clock is received. When chance is set at the bottom to 0% no triggers will occur. When the slider is set to the top at 100%, modifications will always be applied. Anything in between will activate a modification by chance based on the % stated. This determines roughly what percentage of the time a modification will be active.

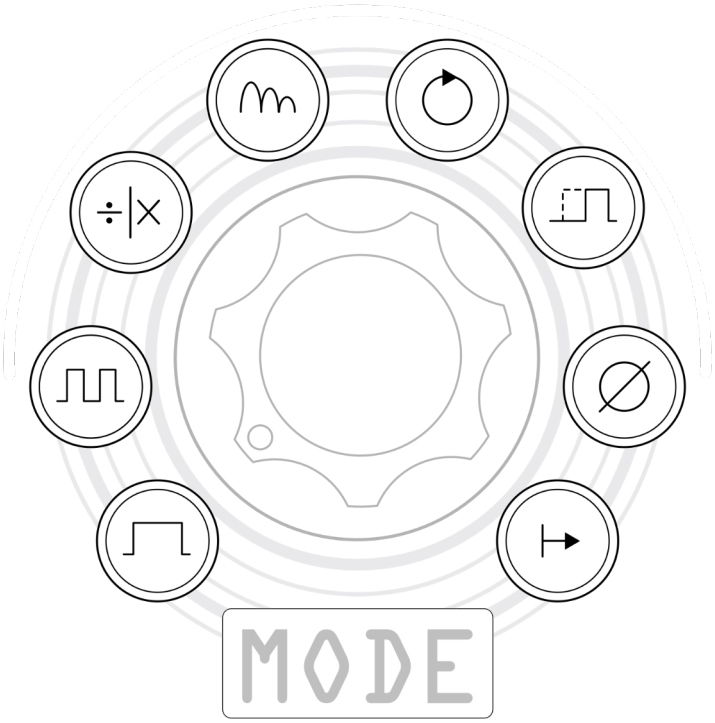
5. ADJUST LENGTH.
Adjust the LENGTH slider up or down to define how long each modification will be active for. Every time a modification is activated, the LENGTH slider will lock in that modification for a specified number of clock cycles. In all modes except for SKIP mode the clock output will be paused causing an external sequencer to be stationary during a modification. For every modification the clock will only advance on the first step of the modification.

6. REMOVE MODE.
You can remove the current mode from the pool of available modifications by quickly pressing the REMOVE MODE button on the selected mode. This is also a way to prematurely end any modifications that are currently active. Removed modes have an unlit LED. The mode can be reinstated by quickly pressing the REMOVE MODE button on the selected mode again . Note that incoming mode CV can affect the selected mode: sometimes the dial may not point to the actual selected mode. To avoid this, remove modulation before adding or removing modes first so you know which mode is selected.

7. LOOP.
IDUM has the ability to loop the most recent eight steps of activity. Engage the looper by pressing the LOOP button to toggle loop mode ON (lit) or OFF (unlit) or by sending a gate into the loop gate input. This function captures the last 8 steps of gate inputs along with the modifications and settings, then replays them in a loop. IDUM's physical controls will now control the playback of the loop. See more details on this in the LOOP section.

8. CHECK / ADJUST SETTINGS.
To adjust some hidden IDUM settings, long press the REMOVE MODE button. The selected options (also labelled on the purple panel) will be illuminated on the MODE ring. Rotate MODE to the desired option and tap REMOVE MODE to toggle whether the selected menu option is active. Any CV modulation applied to the mode input will change where the dial is being pointed, so modulation plugged into the MODE input should be unplugged or muted. Options set here will be saved for future use even after power down. Long press REMOVE MODE again to return to IDUM's normal operating mode. More details on each specific mode in the MENU section of the manual.

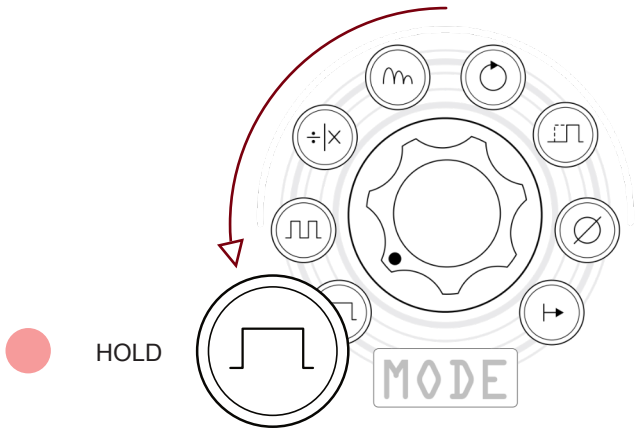
MODES



#1 - HOLD MODE

HOLD mode modifies the length of incoming triggers. The PARAM knob has a different function depending on whether it is turned clockwise or counter-clockwise. With the PARAM knob at noon, these triggers will pass through unaltered. When turned clockwise from noon, incoming triggers will be lengthened gradually until they are held for the length of the modification. When turned counter-clockwise from noon, incoming triggers will be probabilistically skipped with the likelihood of a skip increasing as the knob turns further counter-clockwise until being completely muted.

HOLD

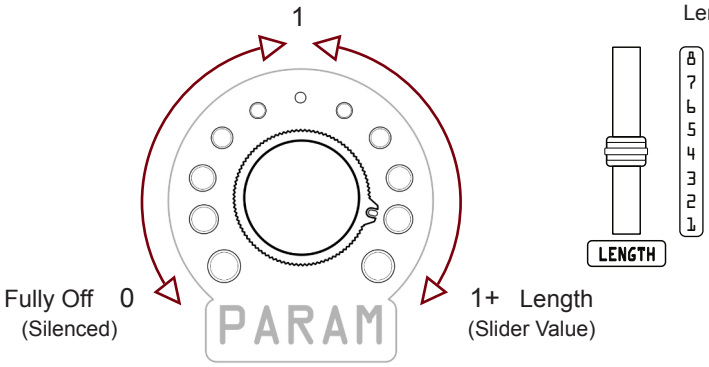


LEFT SIDE

Skip Triggers

RIGHT SIDE

Lengthen Triggers



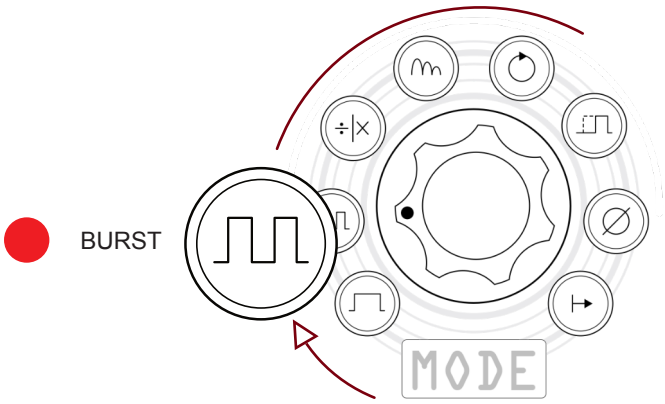
Left side of the PARAM knob sets the probability of incoming gates being skipped. The decision to skip a gate is made independently for each channel upon receiving a gate at that channels input, but the probability is shared among all the channels. With the PARAM knob at noon, the probability of a skip is 0%. With the PARAM knob fully counter-clockwise the probability of a skip is 100%. Everything in between gradually shifts between the two

Right side of the PARAM knob will increase the length of incoming triggers by a percentage of the modification length. This will only lengthen gates (not shorten them), so the effect only engages when incoming gates go low. With the knob at noon, incoming triggers are passed through at the same length that they come in. At fully clockwise, the end of gates are extended by the length of the modification. Everything in between extends the gates by a percentage of the modification length.

#2 - BURST MODE

BURST mode will activate a trigger burst/ratchet whose speed is a multiple of the incoming clock speed whenever a trigger is received at one of the four trigger inputs. A burst of triggers activates the first time a trigger is received at each channel's trigger input and then continues for the rest of the modification. The speed of the burst is a multiple or division of the most recent clock interval with the multiplication factor being determined by the PARAM knob. Bursts are reset whenever a trigger is received, so if triggers are coming in that are not on quantized clock steps, then the burst can also be offset from the clock grid.

BURST

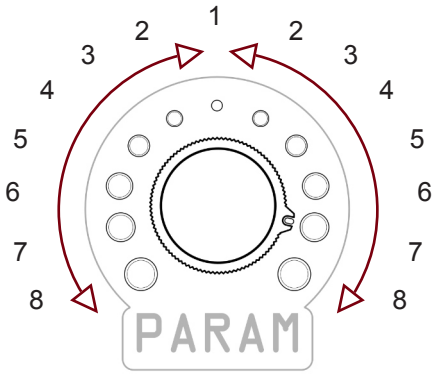


LEFT SIDE

Control Burst Speed Division

RIGHT SIDE

Control Burst Speed Multiplier



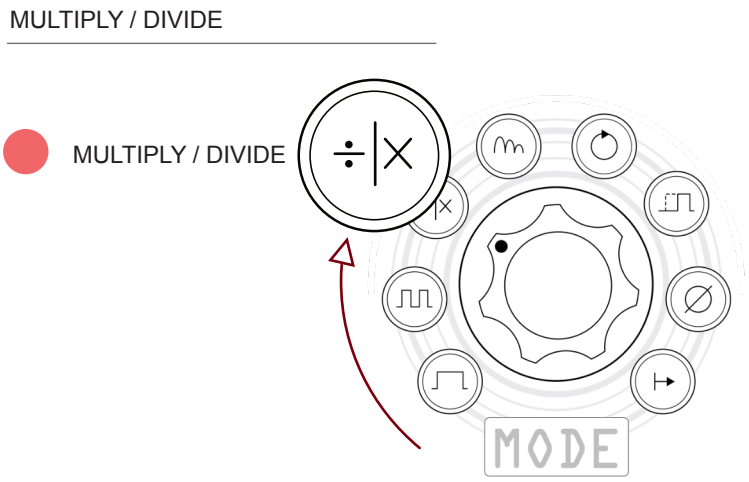
Left side range sets the burst speed division parameter. The output will be based on the clock input divided by this parameter value.

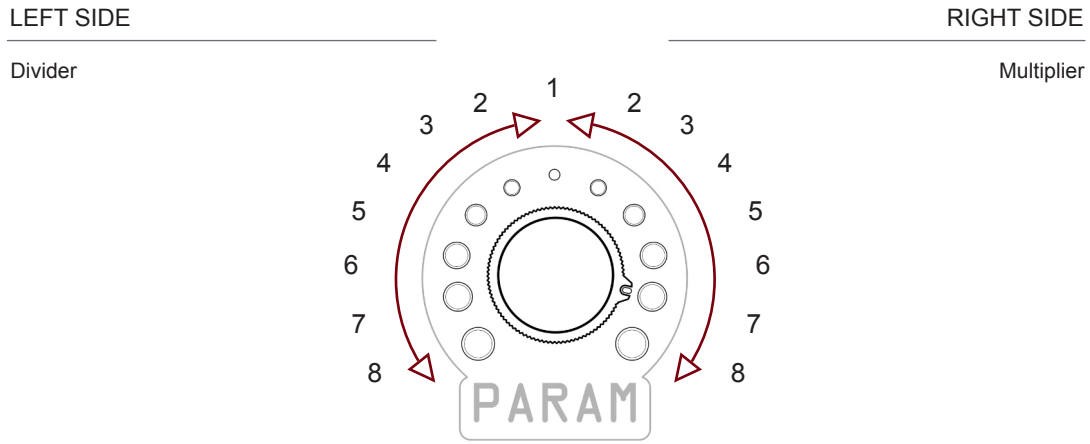
Right side range sets the burst speed multiplication parameter. The output will be based on the clock input multiplied by this parameter value.

At faster clock speeds it is possible to generate triggers that are too fast for IDUM to produce when at the highest settings. In such a case the trigger outputs will be silent.

#3 - MULTIPLY / DIVIDE MODE

MULTIPLY/DIVIDE mode offers a second flavor of trigger bursts whose speed is determined by the time between incoming triggers instead of the clock. The burst speed of each channel changes dynamically as new triggers come in and can have a burst speed that is different from that of other channels while sharing the same multiplication/division parameter between channels. The burst start time is reset whenever a new gate comes in, so effects may be subtle when using this mode with a large division parameter.



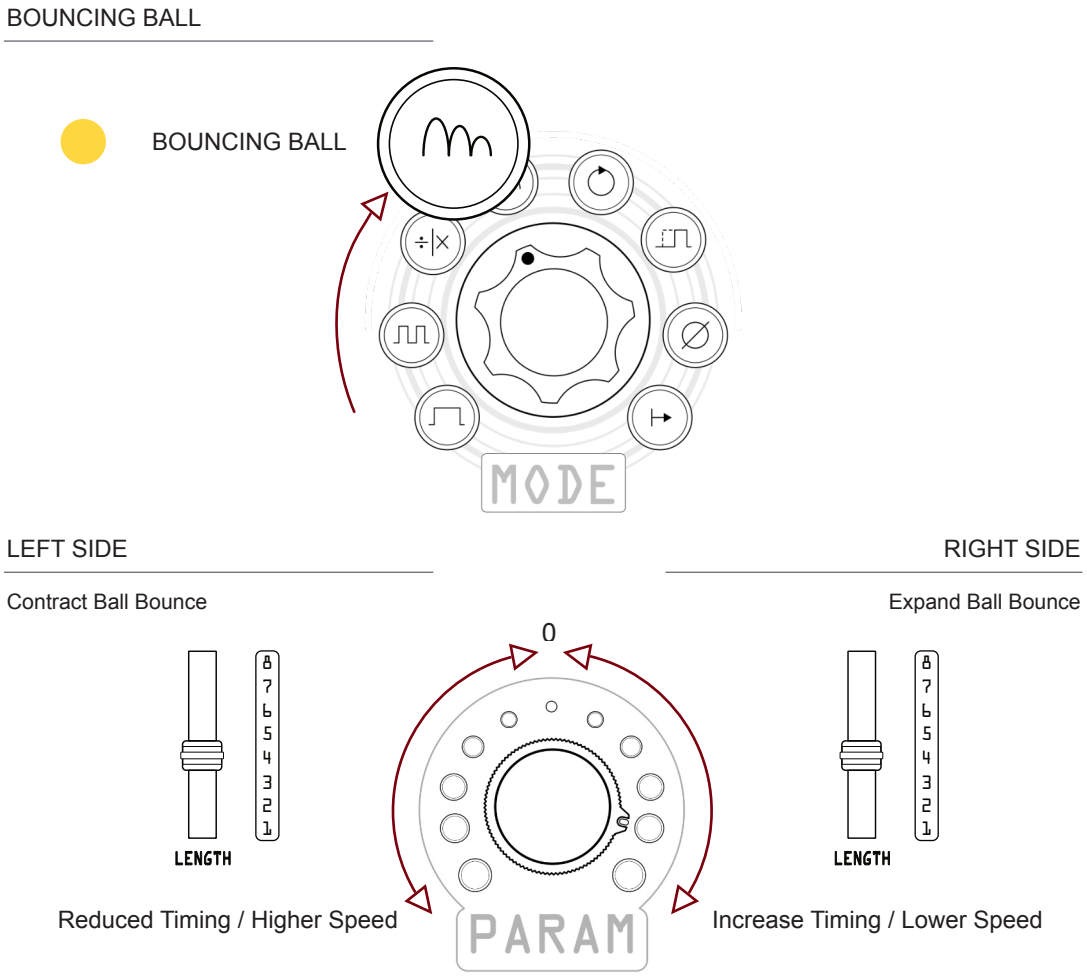


Left side: Create bursts of triggers whose timing is a division of the most recent trigger interval timing. This will only have a noticeable effect when incoming triggers are changing in time so a steady trigger source like a clock divider or an LFO will not have a drastic effect in this mode. When all the way counter-clockwise the speed of incoming triggers is divided by 8, at noon the trigger output will repeat at the most recent trigger interval.

Right side: Create bursts of triggers whose timing is a multiplication of the most recent trigger interval timing. At noon the trigger output will repeat the most recent trigger interval, all the way clockwise the speed of incoming clocks is multiplied by 8. Similar to Burst mode there is a limit to how quickly these triggers can be generated so if the parameter knob is set very high and incoming triggers are also fast the output will be silent.

#4 - BOUNCING BALL MODE

BOUNCING BALL mode is yet another flavor of burst that is unquantized from the clock and either increases or decreases in speed over time. This can create a pattern similar to a ball bouncing off a table and losing energy each time it bounces. On the right side of the PARAM knob, the triggers will start fast and gradually get slower for an "expanding" effect. On the left side of the PARAM knob, the triggers will start slow and gradually get faster for a "contracting" effect. In both cases, the effect gets faster the further away from the center of the PARAM knob you travel, and the burst of triggers starts every time a trigger is received at each input.



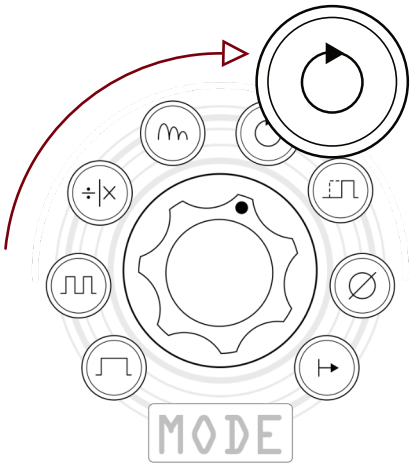
CONTRACTING BALL effect. The further counter-clockwise the PARAM knob travels the faster the ball will contract. Overall contraction length is scaled by the length slider.

EXPANDING BALL effect. The further clockwise the PARAM knob travels the faster the ball starts at the beginning of the effect. Overall expansion speed is scaled by the length slider.

#5 - ROTATE MODE

ROTATE mode will scramble the connection between the trigger inputs and outputs on IDUM. When the PARAM knob is turned clockwise from noon, each output will be shifted right, wrapping around to the left when it is shifted past output 4. When the PARAM knob is turned counter-clockwise from noon, the inputs and outputs are swapped in pairs to create new possible arrangements of the outputs.

ROTATE



ROTATE

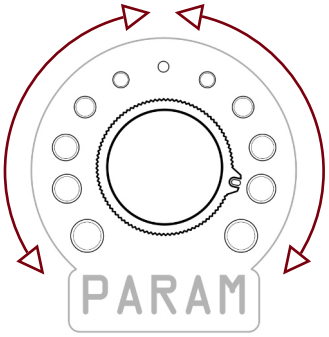
LEFT SIDE

Scramble Triggers

RIGHT SIDE

Rotate Triggers

Swap Index



Rotation Index

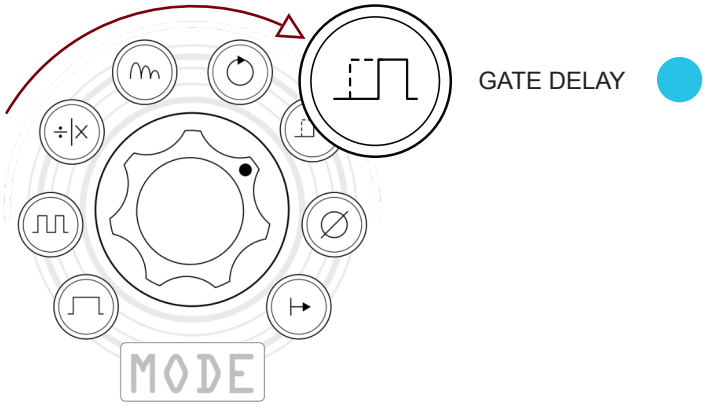
Left side: progressively swap different pairs of inputs and outputs in a criss-cross pattern.

Right side: rotate outputs to the right with outputs past output four wrapping back around to output one.

#6 - GATE DELAY MODE

GATE DELAY postpones the output of each gate by a variable amount to shift the timing of the outputs and create wonky, off-kilter rhythms. Instead of applying a static delay amount to input triggers, this mode uses the timing between the most recent gates at each input as the fundamental delay time. Then, the PARAM knob sets a certain percentage of the fundamental delay time that each output is delayed by. Similar to the MULTIPLY/DIVIDE mode, this means that the delay for each channel changes dynamically depending on what is happening at each of the inputs. With the PARAM knob at noon, (almost) no delay is added to the outputs and turning the PARAM knob either left or right from center will increase the gate delay time.

GATE DELAY

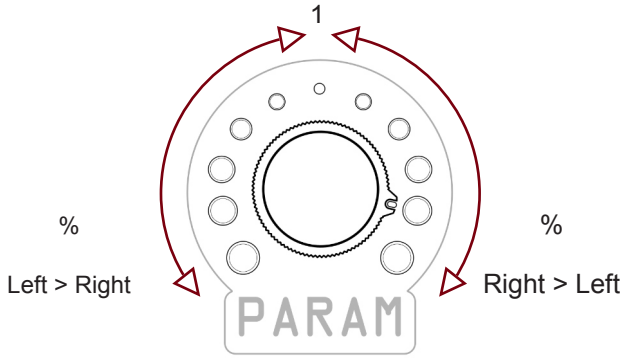


LEFT SIDE

Delay Gates (Left Side > Right Side)

RIGHT SIDE

Delay Gates (Right Side > Left Side)



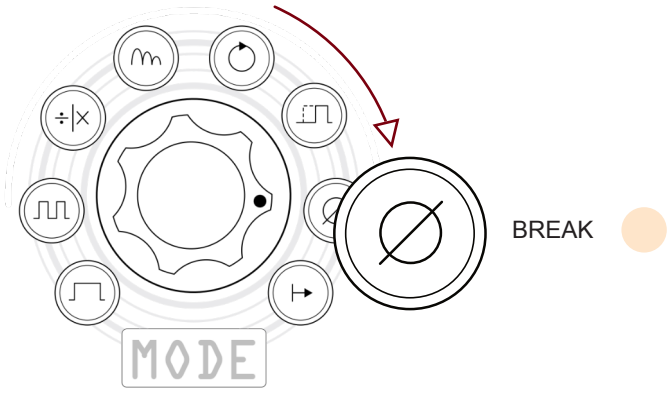
Left side, counter-clockwise will delay the gates to the left side more than those to the right. The more to the left will increase delay time.

Right side, clockwise will delay the gates to the right side more than those to the left. The more to the right will increase delay time.

#7 - BREAK MODE

BREAK mode plays a preset rhythm that is altered by incoming triggers. The PARAM knob selects one of the 16 rhythms in the rhythm bank, left to right. Whenever a trigger is received at each trigger input, the preset rhythm is reset on that specific channel. This transforms the preset rhythm into a sort of 'mask' that turns anything coming in into a breakbeat. The rhythms are written with specific drums playing from each channel in mind, but obviously feel free to plug each channel into whatever you like. TR1 out is intended to be a bass drum, TR2 is intended to be a snare, TR3 is intended to be a high hat, and TR4 is intended for either a percussion element or to trigger a melodic synth line.

BREAK

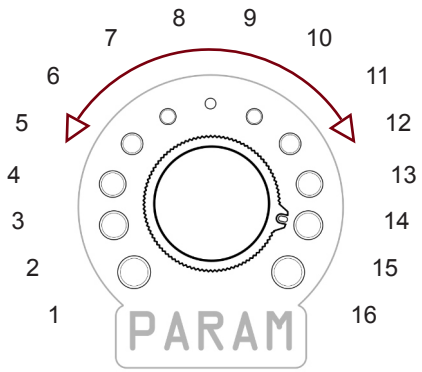


LEFT SIDE

Presets 1-8

RIGHT SIDE

Presets 9-16

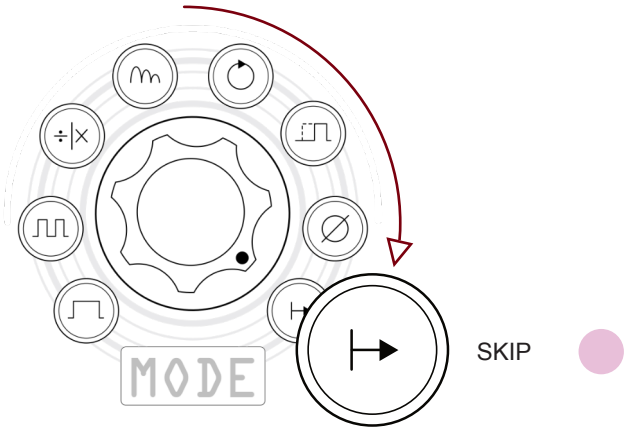


Unlike most of the other modes, there is no left and right function to the PARAM knob for this mode. Instead, the presets are selected 1-16, from fully counter-clockwise left to fully clockwise right.

#8 - CLOCK SKIP MODE

Manipulate the position and speed of an external sequencer connected to the clock output. Unlike other modes, the skip modification operates only on the clock input / outputs applying ratchets or step skipping. This mode does not affect the triggers.

CLOCK SKIP

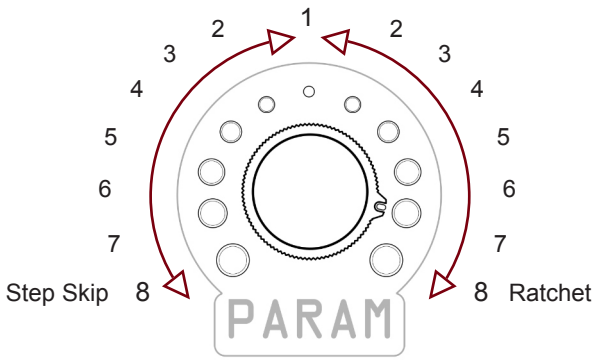


LEFT SIDE

Skip Steps

RIGHT SIDE

Ratchet Clocks



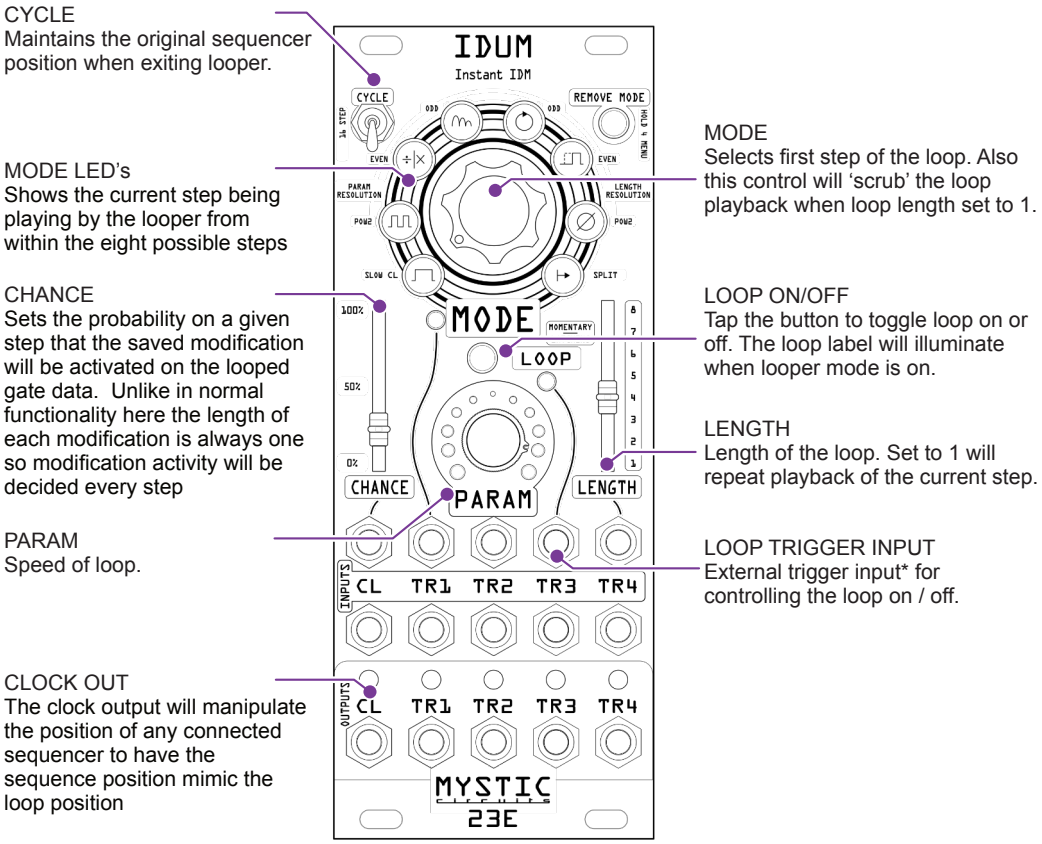
Left side range sets the number of steps to skip. This setting triggers a burst of clocks that skip the clock forward by a specified number of steps.

With the parameter knob fully counter-clockwise IDUM will skip 8 steps every time it receives a clock, effectively ‘freezing’ an 8 step sequencer.

Right side of the parameter knob multiplies the speed of the clock output. This gives an 8-bit arpeggiator style effect. At noon the clock is passed through unaffected, fully clockwise the clock speed is multiplied by eight

LOOPER

IDUM's LOOP function will record the eight most recent steps of triggers along with whatever modification activity was happening on that step and then replay those eight steps. While the looper is active, IDUM's controls switch their normal functionality to give control over the loop playback parameters. The looper can be activated manually by pressing the 'LOOP' button under the mode dial or by sending a gate into the LOOP gate input. The sequencer connected to the clock output will have its sequence position manipulated in order to reflect the activity of what is happening with the looper. For example, if you set the loop length to 4, the external sequencer will have a length of 4; then, if you use the MODE knob to scrub the looper position, the sequencer will also scrub its position. Currently firmware allows the looper to only capture one trigger per step, so it may not sound exactly like the input.



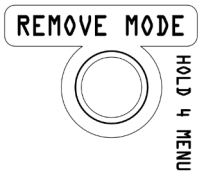
Note: The behaviour of the gate input can be switched from toggling the loop on/ off to momentarily changing the loop on/ off while the gate input is high. This is done in the options menu which is covered in the next section.

USER NOTES

SET UP

SETUP MENU

IDUM has some extra options under the hood that can be accessed through the MENU. In this mode, the active settings for each mode are displayed on the MODE ring of LED's and LOOP LED. These settings are saved when you exit the MENU and will save over power cycles. To enter or exit the MENU, long press on the REMOVE MODE button to change the menu options. Then, point the MODE knob at the option you would like to change. Then short press on the REMOVE MODE button. It is important to unplug any modulation from the mode CV input because this will influence where IDUM's processor will think the mode dial is pointed. The names of each option are faintly written on the panel.



REMOVE MODE

Long Press to activate Set Up. LED's will show current configuration.

Turn 'MODE' to point to the desired option then tap 'REMOVE MODE' to select

CYCLE SWITCH

In Set Up Mode the 'CYCLE" Switch will allow setting the sequencer from 8 steps to 16 steps. This is not implemented in version 1.0 of the firmware.

The setup options control the global configuration and resolution when operating in several of the modification modes. These affect the control applied by the parameter knob and the length slider. These options make it easier to manage tempo sync'ed trigger manipulation and for predicting how long modulations will occur, especially with weird settings. In addition the setting of the clock speed and global step length can be set up globally.

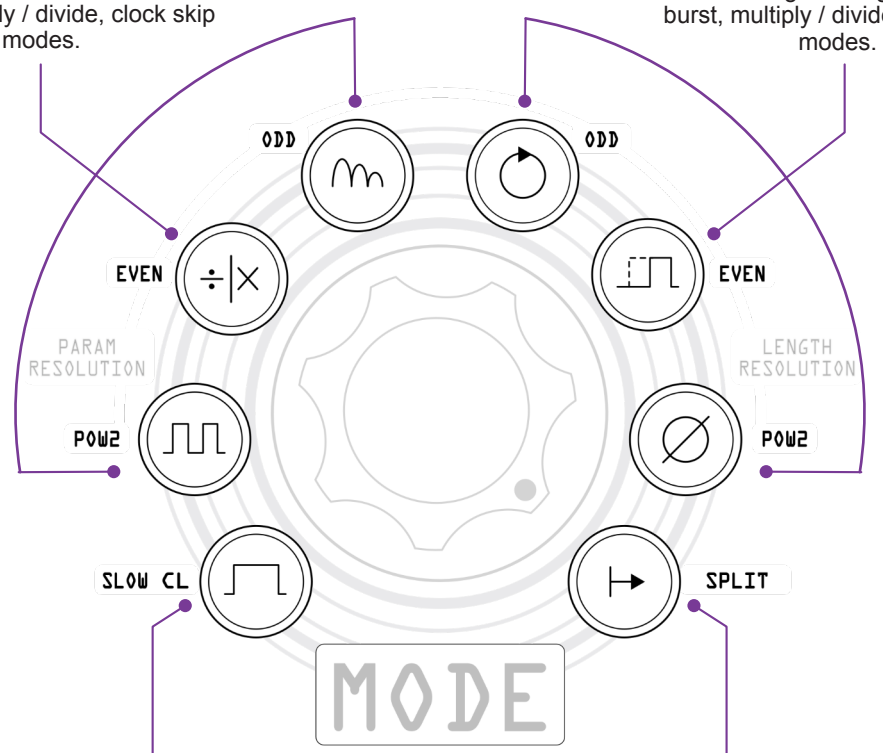
SETUP
Options labelled on faceplate.
Lit LED shows current selection.

2

PARAMETER RESOLUTION
Selects which values are selected when using the parameter knob in burst, multiply / divide, clock skip modes.

3

LENGTH RESOLUTION
Selects which values are selected when using the length slider in burst, multiply / divide, clock skip modes.



SLOW CLOCK
Sets the speed of the clocks in the clock stream to synchronise or manipulate the clock in skip mode.
LED Unlit, clock bursts are slow.

1

SPLIT
Sets individual trigger input behaviour. Future Implementation, not currently available.

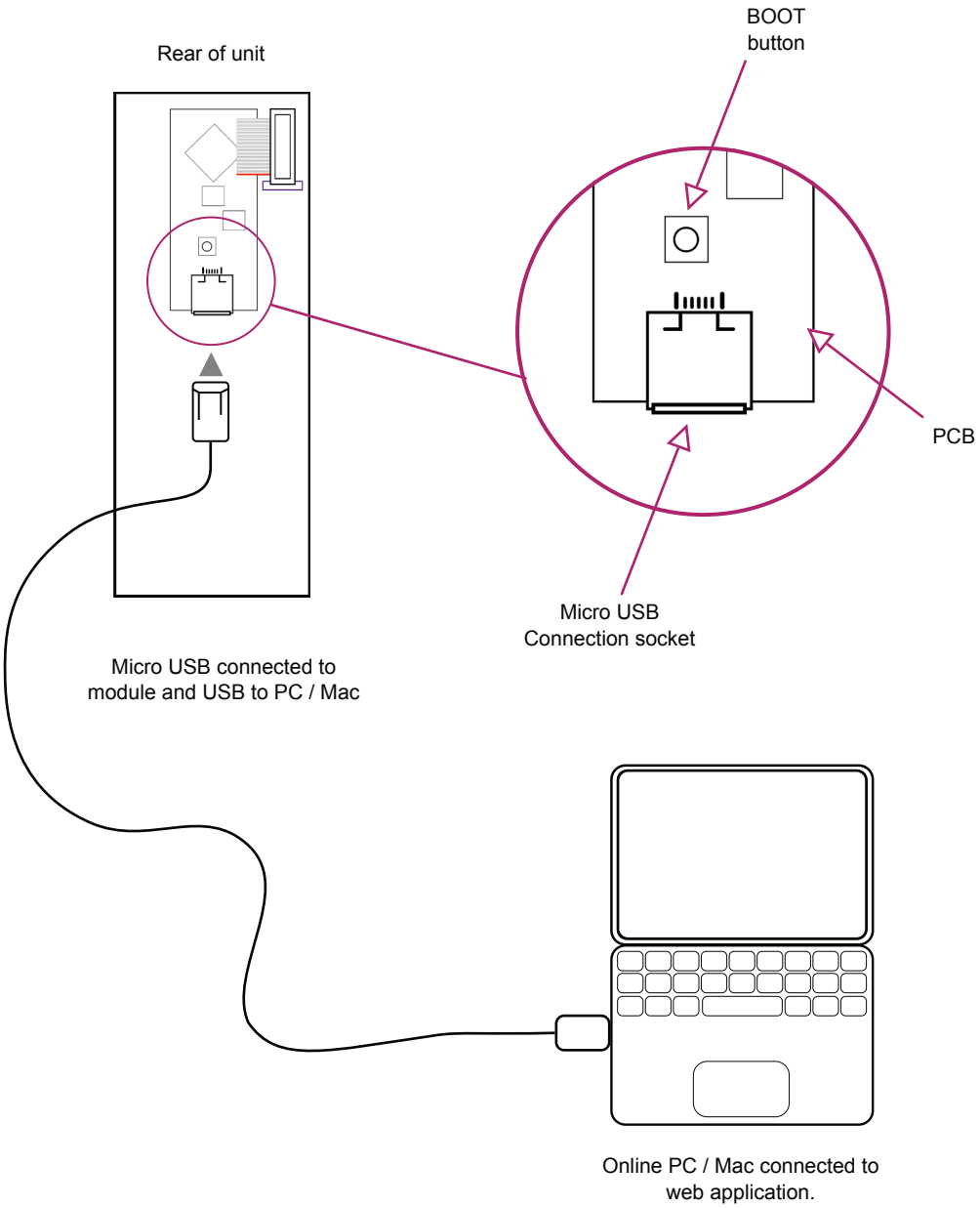
4

SETUP MENU OPTIONS

Option	Sub Setting	Description
Parameter Resolution	ODD	This option will restrict certain values of the parameter knob's resolution. A good example is the BURST and MULTIPLY/DIVIDE modes, setting this option to 'odd' will allow any value from 1 - 8.
	EVEN	This option will restrict certain values of the parameter knob's resolution. A good example is the BURST and MULTIPLY/DIVIDE modes, selecting 'even' will only allow even values i.e. 1, 2, 4, 6, 8.
	POW2	This option will restrict certain values of the parameter knob's resolution. A good example is the BURST and MULTIPLY/DIVIDE modes, selecting 'pow2' will only allow powers of 2 i.e. 1, 2, 4, 8.
Length Resolution	ODD	This option will restrict the values available to the length slider. Setting this option to 'odd' will only allow any value from 1 - 8.
	EVEN	This option will restrict the values available to the length slider. Selecting 'even' will only allow even values 1, 2, 4, 6, 8.
	POW2	This option will restrict the values available to the length slider. Selecting 'pow2' will only allow powers of 2, which are 1, 2, 4, 8.
Slow Clock		Sets the speed of clock bursts that are used to re-synchronize and manipulate modules that are plugged into IDUM's clock output. For slower and especially digital sequencer modules, it is best to use the slow mode by leaving this option LED off. When using a faster analog sequencer (such as Tree) it is best to turn this option LED on. It is worth noting that if your module is not working as expected with the cycle/skipping behaviour, it is good turn this mode off.
16 Step		Currently unimplemented option that will allow the looper and length of modifications to go all the way up to 16 steps so that IDUM can be used with a 16 step looper. This will be controlled by the cycle switch. Stay tuned for the firmware update for more details.
Split		Currently unimplemented, but will eventually allow each trigger channel to select when it is doing a modification and its selected modification independently. Stay tuned out for future firmware updates that will add new functionality to IDUM
Loop		Pressing the LOOP button while in the setup menu will alter the behaviour of the loop gate input. When this LED is off, gates coming in will toggle the status of the looper with each rising clock 'flipping the switch' from on to off. When this LED is on, gates will now momentarily flip the status of the looper for as long as the gate input is high.

FIRMWARE UPDATE

Occasionally firmware updates are available. This maybe to provide improvements to the functionality, fix bugs or add new features. Updates are applied using the micro USB connector on the rear of the unit and connecting to a PC or Mac. Instructions to update are not provided here due to potential changes in the process per update. These will be provided for each update at the mystic circuits site.



Firmware Update Instructions
Visit the Mystic Circuits github for the latest firmware and instructions

Limited Warranty

Mystic Circuits warrants all products to be free of manufacturing defects related to materials and/or construction for a period of one (1) year following the product's purchase date by the original owner as certified by proof of purchase (i.e. receipt or invoice). This non-transferrable warranty does not cover any damage caused by misuse of the product or any unauthorized modification of the product's hardware or firmware.
Mystic Circuits reserves the right to determine what qualifies as misuse at their discretion and may include but is not limited to damage to the product caused by 3rd party related issues, negligence, modifications, improper handling, exposure to extreme temperatures, moisture, chemicals and excessive force.

Please Protect the Environment.
Waste electrical products should not be disposed of with household waste. Please recycle where facilities exist. Check with your local authority or retailer for recycling advice.

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Manual designed by Synthdawg

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