



WEAPONISER



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1 Weaponiser

Weaponiser is an all-in-one solution for Weapon design, as a VST/AU/AAX plugin. It helps make advanced weapon design process fast, efficient and affordable, and provide means for endless variation, with unparalleled sound quality in real-time. Using a combination of high-end synthesis, and an advanced system of managing a vast library of pre-recorded audio, we hope it will soon be your 'go-to' for designing weapon assets in your DAW.



2 Installation

Run the installer downloaded from krotosaudio.com. This will place VST/AU/AAX versions in the correct locations on your system automatically. It will also install various assets required to run the plugin.

2.1 Copy Protection

The plugin uses **iLok** for copy protection. We have chosen to use this option as it both protects our software and offers a highly flexible way of managing your plugin license.

You will need an iLok ID/account to use the software. You can create an account for free at [iLok.com](https://ilok.com). Then, you will then need to download **iLok License Manager**. Your license will allow you to use the plugin on one computer at a time. You may need to update to the latest version of iLok license Manager to use the plugins.

You do NOT need an iLok dongle/USB key to use the plugin.

You do not need to use an activation code (although some users may have been provided one, especially if you have purchased Krotos software from a reseller)

iLok now supports online activation and cloud-based license management, so you can activate and move your license between computers (and dongles) easily. This is all done using the iLok License Manager.

2.2 Starting a Demo

Weaponiser can be used for 10 days as a fully-functional demo without a license.

You will need an iLok account to activate the demo.

You do not need a physical iLok to evaluate the plugin.

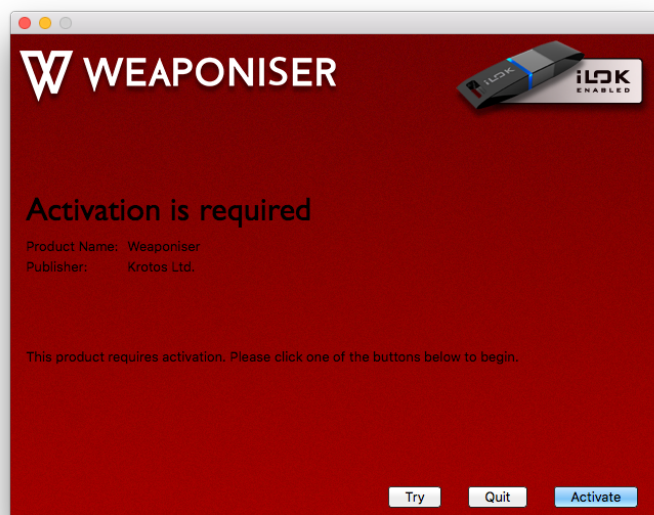
You will only be able to evaluate the demo once on your iLok account.

To start the demo, add Weaponiser to a track in your DAW.

When the iLok popup appears, choose 'Try', and follow the procedure on-screen.

Log into your iLok account and choose a location. Your demo will now be active.

You will see a popup window again in 10 days time, when your demo will expire. To continue to use the plugin and Analysis Tool, you will need to purchase a license from

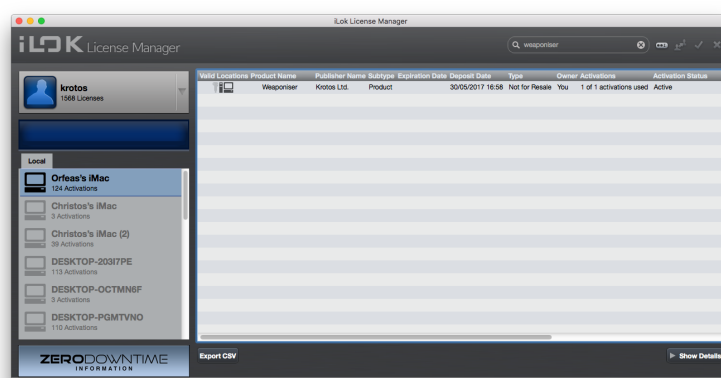


<https://www.krotosaudio.com/products/weaponiser/>

If you have any issues getting started, please contact support@krotosaudio.com

2.3 Activating the Plugin

Log into your account using the iLok License Manager. You will find a the 'Weaponiser' license in the main window (on the right-hand side). These will appear in **BOLD**. Click and drag these licenses to a location on the left-hand side. You can activate to either the local machine or an iLok2.



If you find yourself opening your DAW before following this procedure, and encounter an iLok activation window, [follow these instructions](#).

3 Getting Started with Weaponiser

Weaponiser focuses on providing a quick and powerful workflow for designing weapons of various kinds. By default, the plugin is set up for single shots, but can be used for rapid-fire weapons by switching to “Burst” mode.

The plugin contains four main engines. These separate the shot into composite layers, which sound designers typically use to construct a complex weapon sound (naming for these layers varies across the industry, and we have chosen names we feel are appropriate). All four engines are built around our flexible sample-based engine, which allows of maximum variation of sets of assets. Each engine contains four of these ‘players’, with identical controls.

Each engine also contains a synthesis engine, designed especially to suit the particular layer/engine it is placed in, to improve speed of workflow.

Weaponiser uses the concept of ‘tails’. This is a concept used by sound designers when separating the initial sound of a gunshot from the ‘decay’ or ‘tail’ of this gunshot. By separating the initial elements of a gunshot, and designing and mixing these tails in a dedicated way, users can have precise control over the placement of the gunshot in space, separate from the core sound of the weapon. This also allows users to easily exchange tails from other locations (if these are available) or use different impulse responses to keep the core design and sound of a weapon, but place it in a different environment. For example, this concept is common in game audio, where different tails will be placed and/or mixed onto the core weapon sound depending on the environment the player finds themselves in, or the distance from another weapon being fired.

3.1 Adding the plugin to your session

Weaponiser is a midi-instrument plugin.

It will need to be added to a midi track in your DAW (or an instrument track in Pro Tools).

We recommend creating a stereo instrument track in Pro Tools, and adding either of the plugins from the insert > Multi-channel > Instrument folder

3.2 Triggering

Use the red ‘FIRE’ button to fire the Weaponiser!

This will trigger all the engines in the plugin (including any synth modules), and play all samples currently loaded into a bank. In ‘Burst’ mode, it will continue to trigger these modules and banks at the currently selected fire rate, until released. If you have multiple samples loaded in to a bank, these will be cycled through one by one during burst fire (this is covered in more detail later in this manual).



3.3 'Burst' Mode

'Burst' mode is designed for designing automatic, or rapid firing weapons of any kind. It allows you to design a single shot, and use the same assets to create a 'Burst' of the same type of weapon. This allows for some exciting and unexpected results. Transforming a pistol into an automatic pistol has never been easier! You may also find that burst fire is very effective at different rates or on a weapon never intended to burst, experiment and have fun...



'Burst' mode is extremely easy to use. Simply turn it on using the switch directly below the 'FIRE' button, and set your Fire-rate. Press and hold the 'FIRE' button to unleash a Burst!

We recommend using the variation controls in the engines when using 'Burst' mode, and also the 'drunk' timing slider, which will prevent unnatural sounding repetition in your weapon design.

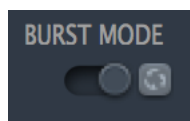
Burst Mode variation

Variation can also be added to burst mode. Simply hold ALT and click-drag with your mouse to add modulation. Each time you fire a burst, a fire rate will be chosen within this range. This is ideal for adding very subtle variations between bursts, for more experimental weapons, to simulate breakdown in a weapon's behaviour, or for more flexible sound design in any use case.



Burst Bank Mode

In the same way that the contents of each bank can be switched between 'round-robin' or 'random', you can do the same in burst mode. Click once on Burst Mode Bank Mode to switch between round-robin and random behaviour.



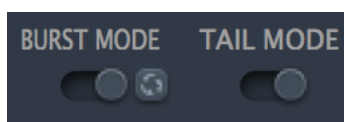
PLEASE NOTE – This switch is global, and will override any individual 'bank mode' selections in each engine. Whichever setting selected in the burst mode bank switch will be applied to all banks in all engines, but only in burst mode.

Tail Mode

This switch changes the behaviour of the Tail engine of Weaponiser, but only in Burst Mode. When activated, the players, banks and Convolution Reverb engine (depending on the status of IR Mode) in the Tail engine will only trigger on the last round of a burst, or the 'release' of a burst. When inactive, any assets in the tail engine will be triggered on every round fired. This is a useful feature to manage the handling of tails, to create cleaner designs, or delay certain assets or tails placed in the tail engine.

When Burst Mode is active, simply flick the Tail Mode switch to the right to activate this mode.

PLEASE NOTE – Tail Mode will be greyed out when not in burst mode (this is because it only takes effect when in burst mode)



4 File Browser

The file browser is a quick and easy way to navigate Weaponiser's extensive factory assets, or your own assets.

The browser includes two tabs at the top of the screen. The 'Library' Tab defaults to the location of Weaponiser's Factory Assets, which are included in the plugin, or can be added to by purchasing our 'Total Pack'.



The 'File' tab allows you to navigate on your local/external drive to source a file or folder of your own assets (including external drives).

Once you have selected a file from either the library or a location on your computer, click and drag the name of the file onto a bank in the main UI window.

NB - You can also drag and drop files or folders from outside of the plugin into Weaponiser, and they will be loaded automatically into the engines of the plugin.

4.1 Tags

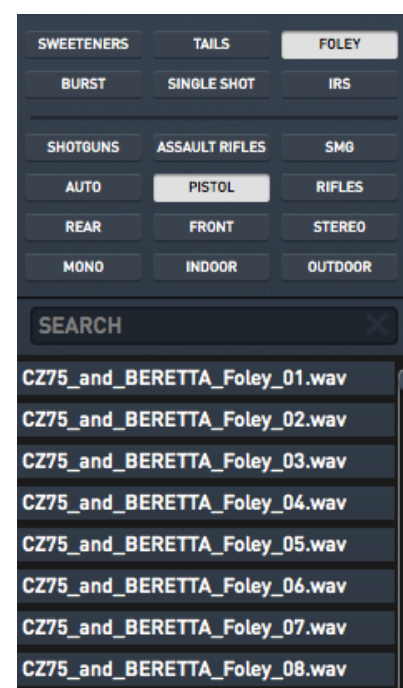
The File Browser includes a handy 'tag' system, that allows quick access and filtering of the plugin's factory assets.

By clicking on a tag, or a number of tags, you can filter the large list of assets available and refine your search using the search bar. For example, you could select 'Pistol', to return all pistol results, reduce this list by selecting 'Front', and then 'Stereo', to list all weapon-facing stereo mic placements of pistol recordings in your factory assets.

Since the plugin ships with hundreds of weapon recordings, sweeteners and impulse responses, this is an ideal way to get started to find the perfect sound.

The tags included are:

- Sweeteners (for quick access to extra sounds to bolster your designs, like kicks, synth one-shots or non-weapon foley)
- Tails (list all available recorded weapon tails, separated from their transients)
- Foley (list all weapon and non-weapon foley, if a weapon type is not selected, all foley will be listed)
- Burst (display all burst recordings from weapons capable of this firing type)
- Single Shots (list all single shots, excluding burst recordings)
- IRS (list all Impulse Responses, which can be filtered further with the 'Indoor' and 'Outdoor' tags)
- Shotguns (list all shotgun recordings and foley)
- Assault Rifles (list all recordings and foley from these type of weapons)
- SMG (list all Sub-machine gun recordings and foley)
- Auto (list all automatic weapon recordings and foley; including assault rifles, and sub-machine guns)

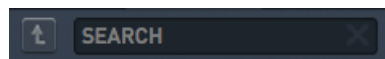


- Pistol (list all pistol recordings and foley)
- Rifles (list all rifle recordings and foley, excluding assault rifles)
- Rear (list all rear mic placement recordings)
- Front (list all weapon-facing mic placement recordings, not including foley and on-gun mic's)
- Stereo (list all stereo mic placement recordings)
- Mono (list all mono mic placement recordings)
- Indoor (list all indoor recordings or Impulse Responses)
- Outdoor (list all outdoor recordings or Impulse Responses)

NB – If you do not select any tags or enter any terms into the search bar, then all the factory assets, or files inside a folder, will be displayed in the browser.

4.2 Search Bar

The File Browser includes a search bar to filter the contents of the factory library or your own folders.



Simply click inside the search bar and start typing. The browser will automatically start to filter and display a new list of contents base don your search terms

Use the 'UP' arrow button to jump up a level on your operating system (when in the 'File' tab)

You can scroll through the list of assets displayed in the browser window using the scroll wheel on your mouse, or by grabbing the grey panel on the left-hand side of the window.



4.3 File Preview

You can easily preview any file displayed in the browser before adding it to any Weaponiser engine.

Activate the File Preview by clicking on the 'speaker' icon on the left.



Use the white volume slider to set the appropriate level for preview playback, and click on any sample to hear a preview.

5 Factory Assets

To allow you to start designing high-quality weapon sounds immediately, the plugin includes a large quantity of weapon recordings. These were recorded exclusively for Krotos by some of the world's leading weapon recording experts at Black Park, in the UK, close to Pinewood Studios.

A large selection of genuine weapons were recorded to capture the visceral impact of live weapons in an outdoor environment.



To capture this fully, our recordists used a large selection of microphones and microphone placements, at various distances. All of these recordings are available for you to use instantly inside Weaponiser, and use in your designs and projects.

These assets have also been used in our own **presets**, giving you a good idea of how to start working with this quantity of recordings, if you have not worked on weapon design before.

Depending on the version of Weaponiser you have downloaded or purchased, you will have a different set of assets. These are accessible outside of the plugin for use in your projects, even if you are not using the Weaponiser plugin.

All assets are recorded at 192khz, 24-bit in .wav format.

By Default, Factory Assets are installed in the following locations:

On OS X: /Library/Application Support/Krotos/Weaponiser/Library/Factory Assets

On Windows: C:\Program Files\Krotos\ Weaponiser\Factory Assets

Wherever possible, we have attempted to include between 3-5 takes per mic position, per weapon. At times this was not possible, due to factors out of our control, but the various asset packs included with Weaponiser will all give you a strong starting point for your designs.

Were possible, we have included both single shots and burst shots (for automatics). Depending on the weapon/effect you are designing, you may want to use either, or both. We recommend using single shot assets for using 'burst mode', as triggering 'burst' assets may produce unrealistic results (but this may be what you're looking for!).

Tails from a burst or single shot will typically be very similar, so our assets named and tagged as 'tails' can be used with either type of shot.

We also include the tail of a shot in the original 'single shot' or 'burst' assets. This is so you can use these assets 'as is' without using different tails from different positions or environments. If you prefer to remove the tail from these assets as part of your workflow, this can easily be done using the waveform selection or amplitude envelope per player. We have chosen to handle our factory assets in this way to provide maximum flexibility, and to give you the choice of working with whichever workflow method you prefer.

A collection of sweetener samples are also included with your Weaponiser installation. The number of samples included also varies with the package you have purchased.

NB – You may discover that certain assets seem ‘clipped’ or distorted. This was a conscious choice made by our recordists, in order to preserve aspects of the power and impact of gunshots, whilst maintaining transient impact. This allows our assets to have impact immediately, without the need for excessive processing. However, to represent a gunshot in films, games and television, processing is common, to give the weapon a ‘larger-than-life’ feel.

Weaponiser Version	Weapon	Type	Number of edited Weapon Recordings	Total number of assets (inc. sweeteners)
Demo	AK47	Assault Rifle	75	96
	Dragunov	Sniper Rifle		
	Beretta	Pistol		
	Spas 12	Shotgun		
Basic	AK47	Assault Rifle	506	1012
	Dragunov	Sniper Rifle		
	Beretta	Pistol		
	Spas 12	Shotgun		
Total	AK47	Assault Rifle	1595	2092
	H&K 416	Assault Rifle		
	M16	Assault Rifle		
	M4 (supressed)	Assault Rifle		
	GPMG	Machine Gun		
	MINIME	Light Machine Gun		
	Mac 10	Sub Machine Gun		
	H&K MP5	Sub Machine Gun		
	Beretta	Pistol		
	CZ75	Pistol		
	Spas 12	Shotgun		
	Winchester 1887	Shotgun		
	Dragunov	Sniper Rifle		

These assets have been recorded with the following mic setups and placements. Full metadata is available embedded into the .wav files.

Microphone Placement/Distance	Microphone Used	Channel Notes	Microphone Position
0M	DPA 4062	Pair, A/B Mono	On Gun
2M	DPA 4006	Stereo pair	Front
3M	DPA 4011	Stereo pair	Front
5M	DPA 4061	Stereo pair	Front
5M	Neumann RSM 191	M/S Pair	Rear
20M	Sennheiser MKH40	Mono	Front
25M	Sennheiser Ambeo VR Mic	4 Channel, Mono, A > D	Front
50M	Sanken CO100	Mono	Front
50M	AKG C414	Stereo pair (Wide)	Front
100M	Schoeps CMC6 (Omni Capsule)	Mono	Front
100M	Neumann KU100	Stereo (binaural)	Front
200M	Sennheiser MKH70	Mono	Front

Some additional notes regarding the Weapon recordings:

- All 5M 'Rear' recordings are Mid/Side recordings (M/S). These are provided as 'raw' and can be decoded and exported again as individual mid or side channels if you prefer (the plugin doesn't provide an internal M/S decoder)
- All stereo files include 'STE' after the distance (apart from the M/S recordings, which include 'MS' in the filename)
- Factory Assets contain three or more shots from each take/mic position
- All M4 recordings include shots with a suppressor (silencer)
- All assets mono unless labelled 'STE' or 'MS' and tagged with 'Stereo' in browser
- Assets labelled as 'On Gun' are a pair DPA 4062's attached on either side of the weapon
Left channel = A, Right Channel = B (e.g. AK47_BURST_ON_GUN_A_01.wav). Because these microphones are extremely close to the weapon's firing mechanism they will sound the most 'mechanical' of all recordings
- **The 25M position uses a Sennheiser Ambeo VR Mic. This records four mono channels, which are included in the factory assets as channels A > D, separated as individual mono channels**



6 Engines

The plugin contains four main engines. These separate the shot into composite layers, which sound designers typically use to construct a complex weapon sound.



All four engines are built around our flexible sample-based engine, which allows of maximum variation of sets of assets. Each engine contains four of these 'players', with identical controls.



6.1 The Four Engines

Weaponiser contains four core engines. Vocabulary varies throughout the industry on what to name these layers. In Weaponiser we have named these engines as follows:

- Yellow = Onset
- Blue = Body
- Red = Thump
- Green = Tail

The engines are designed to play different roles as part of a composite weapon sound.

The Onset, Body and Thump engines each contain four sample engines, and a synthesis engine, which can be toggled on and off (they are disabled by default, unless included in a preset).

Onset can typically be used for the initial attack of the sound, or for a 'charge' of a sci-fi weapon. Our unique 'charge' feature is featured in this module, allowing you to include sounds which build anticipation before the rest of the shot arrives. The FM synth module in the Onset engine is especially designed for this purpose and is ideal for creating rising tones, combining the pitch envelope and duration controls to great effect.

Body is intended for the main content of the sound, and includes an FM synth similar in design to the Onset engine.

Thump is designed to be used for the bass layer of the shot, and includes a synthesis engine designed for these 'kick'-like sounds.

Tail is designed to be filled with various tail recordings from our factory library, or your own assets. These can be triggered in layers, including multiple tails from different firing positions or environments, allowing maximum control over the spatialisation and distance of your shot.

The tail module includes a convolution reverb engine, which can be used with an impulse response to simulate real-world spaces with a high degree of accuracy. Use the 'send' dials in the mixer to balance which engines and proportions are sent into the tail reverb engine. This can be used instead of, or in combination with the sample-players in the tail module (i.e in parallel). This way you can choose to trigger pre-recorded tails either from our factory library, from your own collection of recordings, or use impulse responses. Simply drag and drop an impulse response into the reverb to use it.

All engines are polyphonic by default; pressing 'Fire' once a sample is playing will trigger another version of the sample to be played in addition to the first sample, rather than re-triggering.

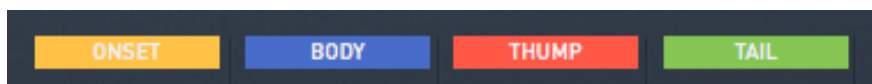
NB - Weaponiser only supports stereo playback from the main plugin at this time. Multi-channel routing can be used to have more discrete control over panning and spatialisation if necessary (see section 11)

The engines are colour-coordinated to help follow which engine you are working on. This colour convention is also applied to any FX applied to each engine in the FX window.

You can move between the engines using the tabs at the top of the engine area, or by clicking on the tabs in the mixer.

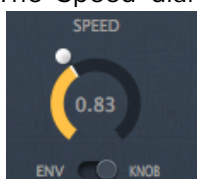


Tabs in mixer:



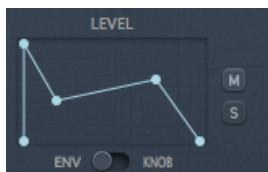
6.2 Speed and Level

The 'Speed' dial on the right-hand side controls the playback speed of the player. This applies to all samples contained in a bank. The 'Level' dial on the right-hand side controls the output level (or amplitude) of the player. This also applies to all samples contained in a bank.



Use the switch below the Speed and Level controls to move between the different sets of controls. 'Envelope' applies an envelope to the parameter (either a pitch envelope, for 'speed', or an amplitude envelope, or 'level') and 'Dial' (which allows you to set a

fixed value for that parameter).



You can select either speed or amplitude envelopes on every player, on every engine. Selecting an envelope will disable the dial behaviour for that particular player, and vice versa.

Each player also has a Mute and Solo button.

6.3 Waveform Viewer

The sample currently loaded into the player will be displayed in the waveform viewer. When using multiple samples in a bank, the currently selected sample will be loaded. On each trigger, a new sample will load into the waveform viewer. When a sample is loaded, a new area selection can be made by clicking and dragging on the waveform. This will be saved and applied the next time the sample is loaded.

Shift > Click on the currently selected area to move the selected area without changing its size.

The '+' and '-' buttons can be used to set the zoom level of the viewer. Using the grey slider along the bottom of viewer will scroll through the length of the sample.



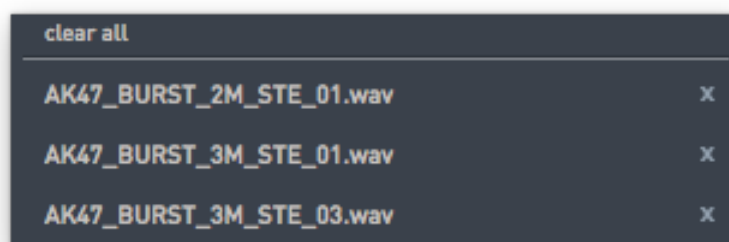
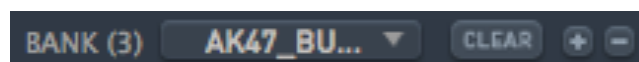
6.4 Banks

Each player contains a 'bank', which can be filled with multiple samples, and played back in order. When assets are loaded into a bank, each time a fire trigger is received for that engine, a sample from the bank will be selected and played. This allows you to build in huge amounts of variation into your weapon designs, by using either multiple takes, or variations of the same sound, or by loading in many different sounds to create a constantly varying character.

Drag and drop a sample from the file browser on the left-hand side onto a player to load assets into a bank. You can also drop multiple files or an entire folder of samples onto a player from Finder (on OS X) or Explorer (on Windows). The number displayed in brackets above the drop-down menu show how many samples are currently loaded into the bank. Clicking on the **drop-down menu** will open it and display the contents of the bank. You can choose to bypass or remove individual samples, or clear all samples here. The **'clear'** button above the waveform can also be used to clear all samples currently loaded into the player.

Once a sample has been added to a player, you can continue to drop more samples onto the player until you reach the maximum capacity (five samples are allowed per bank). Each addition sample will be added to the bank automatically.

Clear a bank by clicking on the **'Clear'** button. This will remove all samples from the bank. If you need to remove an individual sample from a bank, click on the dropdown menu containing the sample names. Each sample can then be removed from the bank by using the 'X' buttons per sample.



Bank Mode

By default, all banks in Weaponiser function with 'round-robin' playback. However, this may not always suit your workflow, or content. We've provided a bank mode switch, to the right of the zoom controls to switch between 'round-robin' and 'random' modes. When clicked, the mode switch will change icon to indicate with mode is currently selected:

When in random mode, any file currently added to the bank will be picked on fire. This is very useful for designing weapons that require a lot of variation in content.



6.5 Variation

A number of controls in Weaponiser allow you to add randomised variation to a parameter. This can be added by using the white circle on the dials. Dragging up and down, whilst clicked on the circle, will allow you to set a variation range for that parameter. This range will appear in blue, as part of the dial. You can still move the dial when a variation range has been applied, but clicking on the dial, as normal. The white circle on the dial will always represent a 'central' value, from which can variation will be applied. For example, in the picture to the right, the central value is 1.00, but with the currently selected variation range, speed values of 0.55 or up to 1.55 may be applied.



On each fire trigger, a value will be randomly selected from within this range, based around the central value set with the main dial position. This allows you to quickly and easily create more realistic-sounding weapons, since the behaviour of mechanical and real-world objects is not linear, and varies on each trigger.

6.6 Synths

The Onset, Body and Thump modules all contain synth modules to augment your design. These can be used in combination with the sample players, or instead of them, if no samples are loaded. Each of the synths in these modules has been designed to be slightly different, and are tailored for use a specific part of a weapon design (for example, the Thump synth is designed for bass ‘thumps’ to add weight to a sound).

Synth engines can be toggle on/off by using the ‘**power**’ button on the top left-hand corner of the synth section. When ‘Off’, the UI each Synth module will ‘fade’ into the background, and controls cannot be adjusted.

6.7 Onset/Body Synths

Both the Onset and Body synths are FM synths, with control over pitch, duration, amplitude using dials or envelopes.

On the right hand side of the UI you will find a **Gain** control, for balancing the output of the synth module, a core **Pitch** dial, to set the core oscillator pitch and a **Duration** dial, to set the maximum length of time thi synth will sound for.

The Onset synth is poly-phonic, and contains four voices which can be used simultaneously. These can be controlled from the ‘**Pitch**’ and ‘**Level**’ sliders on the left of the Onset synth UI. Each voice will have the same settings, as set by the master controls, but include a pitch and level offset for each voice, set by using these sliders. A pitch offset will be applied based on the main pitch of the synth, set in the ‘Pitch’ dial on the right of the UI. When these sliders are at 50% they correspond to the main pitch. Moving the slider to the right, and reducing this value, will reduce the pitch, and increasing the value will increase the pitch of this voice. Setting one of these sliders to 100% will increase the main pitch of the synth to x7 times the core value (e.g. when the ‘pitch’ dial is set to 100hz, setting this slider to max will produce a value of 700hz in this voice). This is ideal for ‘charge-up’ settings for SciFi weapons, where the synth can be used to create a set of rising tones, slightly offset from one-another.

You can also select the carrier and modulator waveforms for the FM synthesis in this area of the UI. Select a variety of waveforms from the dropdown menu. The Body Synth also allows you to change waveform shape in the same area.

Pitch Tab

You can set a pitch envelope and the ‘Depth’ of this envelope in the pitch tab. This allows easy designing of lazer drops or similar sounds. The **Depth** dial controls the amount of modulation is applied from the pitch envelope to the main pitch, set on the right-hand side of the UI. If this dial is set to 0, no pitch modulation will be added, producing a clean tone.



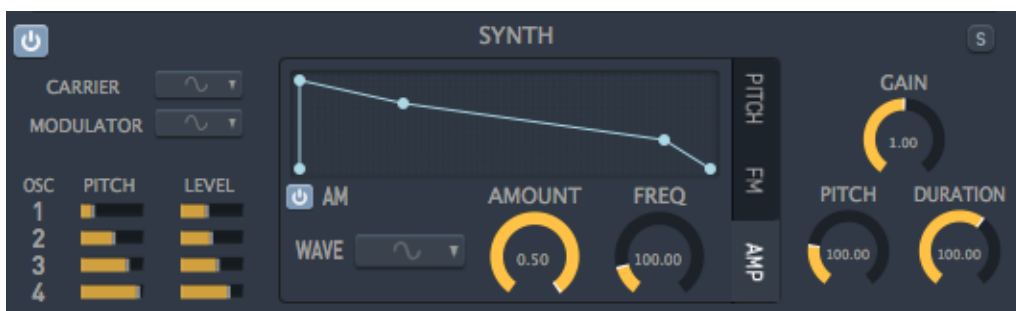
FM Tab

These controls affect how the frequency modulation is applied to the main oscillator. The **Envelope** controls the shape of this modulation. The breakpoints can be used to shape the modulation from the minimum value (x axis) to the maximum value (Y axis). These **Min/Max** values are set with the dials below the envelope. The **Depth** dial controls the amount of this modulation applied.



Amp tab

The **Envelope** in this tab is a traditional amplitude envelope, which is applied to the oscillator (and all voices on the Onset synth). Move the breakpoints to reshape the envelope, and it will be applied when the synth module is triggered.

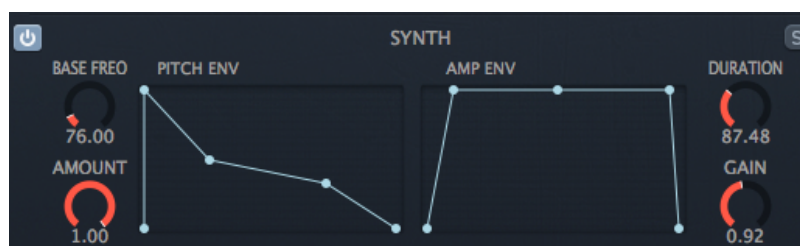


This tab also includes an **Amplitude Modulation (AM)** section.

Use the **'power'** button to activate the amplitude modulation (it is off by default). Select the waveform used to modulate from the **dropdown menu**, and use the **Amount** and **Freq** dials to set the behaviour of the module. This is ideal for adding an extra dimension to your synth sounds, and for creating pulsing effects for sci-fi weapons.

6.8 Thump Synth

This module is designed to add low-frequency weight to your sounds. It can be combined with the samples in the thump engine. It uses a sine wave as its generator.

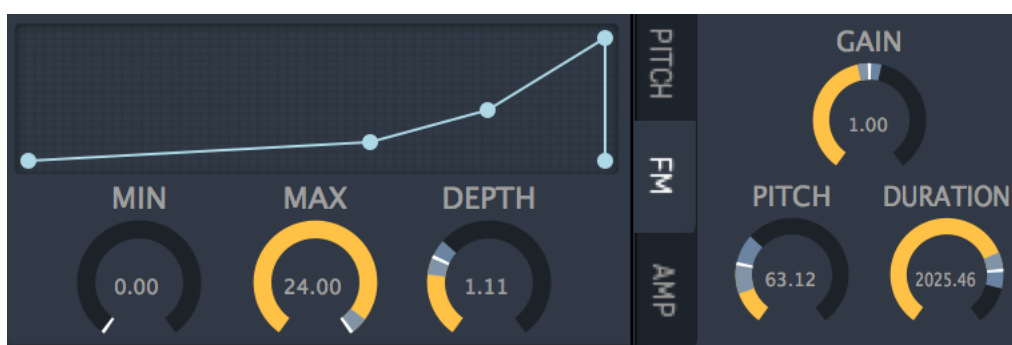


The **Base Freq** dial is used to set the core frequency of the module. The **Pitch Env** envelope affects how the much changes over the duration of the note, based on the amount applied with the **Amount** dial. The **Amp Env** envelope is a traditional amplitude envelope for the synth, and is applied over the duration set in the **Duration** dial. The **Gain** dial sets the output level of the module.

NB – You can use midi to trigger each module of Weaponiser, or the entire engine. This also allows you to sync the triggering of external synth modules or other soft synths in your DAW to the same midi trigger. This way Weaponiser can fit into your existing workflow and use of synths, if you choose not to use the in-built synth modules.

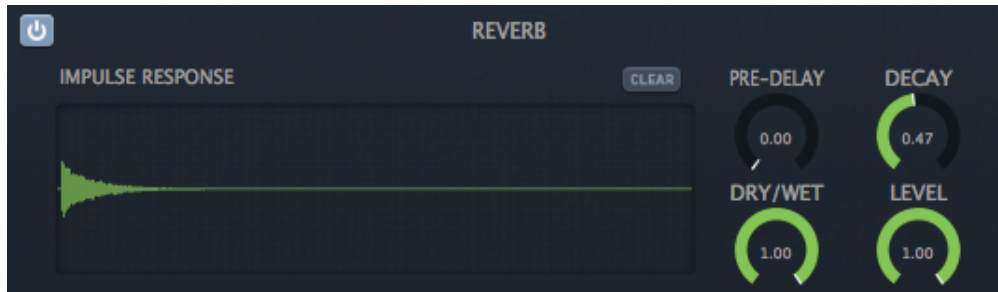
Synth Modulation

As in the main engines, you can add variation values to your synth controls. Hold ALT and click-drag with your mouse to add modulation to these parameters to set a variation range based on the current value of that parameter. When fired, Weaponiser will then choose a value for this parameter in the chosen range, allowing you to design more sensitive and varying designs. This option is available for every control with a dial in each synth. When hovering over these parameters a tooltip will appear describing what you need to do, just for reference.



6.9 Reverb

The tail engine contains a convolution reverb engine, for use instead of, or in combination with recorded tails.



Use the 'power' button in the top right-hand corner to turn the reverb module on. Drag and drop an Impulse Response (IR) into the main module area, either from the File Browser from your main OS. The impulse will be displayed in the waveform viewer in the main part of the module.

Audio can be routed to the reverb by using the '**Reverb send**' controls in the mixer.

The output from the reverb is routed to the Tail module fader in the main mixer.

When using the reverb, you can still use the four sample player engines in the tail engine. Any samples or tails played will be summed with the output of the reverb in the tail fader of the main mixer.

Clear an impulse response from the reverb using the '**Clear**' button.

The **dry/wet** control can be used to mix the processed signal from the reverb with the unprocessed signal received from the other modules

The impulse can be manipulated with the **decay** control, which will reduce the late reflections of the signal processed with the impulse response.

Pre-delay can be added with the control, which will be added to any delay added through the timeline (for the entire tail module).

The **level** control is used to balance the output of the reverb module.

NB – You cannot route samples from the main tail engine sample players into the reverb. The plugin is designed to receive signal from the 'core' engines and then apply the decay of the sound, which can then be mixed.

IR Mode

IR mode relates directly to Tail Mode, under the Burst Mode controls in the top right-hand corner of the plugin UI. When in Burst Mode, you have the option to trigger a tail on every round fired, or on the last round in a burst (this is ideal for certain types of scenarios and spaces). You use Tail Mode to select which method you want to use (see Tail Mode section of this manual). By default, when in burst mode, a round will be triggered in the Onset, Body and Thump engines at the rate set by the Fire Rate, with a round triggered at this interval (e.g. every 75 ms). If routed to the convolution reverb module in the Tail engine using the Reverb dials, the output of these engines will be routed immediately to the reverb. However, when Tail Mode is switched to Tail on Release, you may want the Convolution reverb to behave in a different way to the rest of the engine, when using re-recorded tails. For example, you may not want to

hear the reverb being processed on every round when you have selected to only trigger tails, or the contents of the Tail engine, on the last round of the burst, or the 'release'.



'IR Mode' switches the convolution reverb to behave in two different ways:

- 1) Only triggering on the last round of a burst, or on every round, whilst the rest of the tail engine triggers on release**
- 2) Triggering on every round, when in Tail on Release Mode**

This allows you to have two sets of controls while in trigger on release, and control the separate ways of handling tails when in burst mode. This may sound unusual in certain circumstances, and can also be used for interesting sound design results. As always we encourage you to experiment with these features to find the best fit for your designs.

Pre-Fx/Post-FX routing for IR

You may find that it is useful to route outputs from your engines to the tail engine convolution reverb in different ways, depending on your material.

This switch will change the routing of the Onset, Body and Thump engines to the reverb. When switched to 'Pre-FX', the output of the reverb will be routed before the FX slots in the mixer, per engine. When set to 'Post-FX' the signal processed by the FX slots will then be sent to the convolution reverb by the amount set by the 'Reverb' send dials.



PLEASE NOTE – IR Mode will be greyed out when not in burst mode (this is because it only takes effect when in burst mode)

All Impulse Responses are provided by [MrHay](#), from a range of locations in Scotland and Australia.

7 Timeline

The timing and arrangement of the engines can be offset by using the timeline.



This allows more precise micro-timings between engines, and also additional flexibility through variation each time a shot is triggered.

The timeline contains four waveforms, color-coded and matched to each engine.

- **Onset – Yellow**
- **Body – Blue**
- **Thump – Red**
- **Tail – Green**

Grab the coloured handles underneath the main waveform display to arrange the timing of the engines.

These waveforms update in the timeline depending on the samples or synthesis parameters selected. This allows you to get a very precise image of your layers. Each engine displays a summed waveform of the contents of the engine (samples and synthesis). When a sample or synthesis parameter changes, this waveform will be redrawn. It also allows you to see clearly the durations of the different layers of your sound.

The waveforms are also responsive to mixer settings; increasing or decreasing a mixer fader will affect the 'mix' in the waveforms, causing a waveform for a certain engine to resize appropriately.

It also includes a 'scale' control to zoom in and out, and a 'drunk' control to add a random value to each engine when fired, creating additional timing variation between layers.

Timing is displayed in milliseconds at the top of the timeline.

8 MIDI

Weaponiser is a midi-instrument plugin, allowing you to trigger the entire plugin, or individual engines via midi, using automation or controllers. This is very useful for testing out timings, and quickly previewing material in different engines whilst designing.

It also allows you to trigger each engine from your DAW timeline to sync with screen or video.

Midi notes starting at C4 will trigger the engines:

- C4** – Trigger all engines
- C#4** – Trigger Onset engine
- D4** – Trigger Body engine
- D#4** – Trigger Thump engine
- E4** – Trigger Tail engine

Midi **velocity** can be applied as normal to any trigger message sent to any engine.

9 Mixer

The mixer contains a volume fader for the output of each engine, plus solo and mute controls, and an FX section.



Use the fader to balance the levels of each engine, and the Solo/Mute buttons to select any engine for more precise listening.

The 'send' controls route the output of the Onset, Body and Thump engines directly to the convolution reverb engine of the Tail module

NB – If the convolution engine is not activated, or does not have an impulse response loaded, the send controls will have no effect.

Clicking on the name/coloured label in the mixer will cause the player view to jump to display the selected engine.

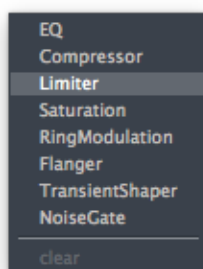
10 FX

Each channel includes four FX-slots. These run in series and can include any one of eight FX modules, selected from the drop-down menu.



The FX modules included are:

- **EQ (5-bands, multimode)**
- **Saturation**
- **Compressor**
- **Limiter**
- **Ring Modulator**
- **Transient Shaper**
- **Flanger/Chorus**
- **Noise gate (with sidechain)**

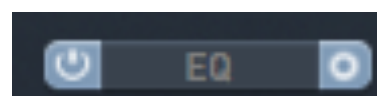


The noise gate includes side-chain capability, simply choose from the 'Source' engine in the drop-down menu, and the use gain dial to control the amount of side-chain signal.

Any of these eight effects can be added to the Master bus by adding them in any of the four available slots. FX are also fully automatable in Weaponiser.

Click on the centre of the FX slot to add an effect. A drop-down menu will appear, and you can select from the list of eight possible effects. Only one instance of each effect can be applied per engine.

The 'O' button on the right of the drop-down menu allows you to view the currently selected effect in this slot. This will appear in the panel below, and the effect being viewed will have its 'O' button highlighted. The 'power' button acts as an on/off, or bypass for that effect.



11 Multi-Channel Routing

Weaponiser allows the output of each engine to be routed back to your DAW to full flexibility for mixing or rendering layers of your design. For example, you may want to render each layer individually for mix later, or to export into a game engine or audio middleware solution.

This feature also allows you to design in Weaponiser, and output to your DAW to mix per engine, adding any of your favourite plugins onto the output of each engine as inserts to these individual tracks.



In your DAW of choice, create four new audio tracks, and set the input of these to Weaponiser. From here you will be able to select an individual engine to route from.

For example, in Pro Tools, once you have added a Weaponiser plugin to your session, create 4 more stereo audio tracks. In the I/O section of the mixer, under input, choose 'Plugin' > Weaponiser, and then an engine to route this track. Do this for all 4 tracks to route all four engines.

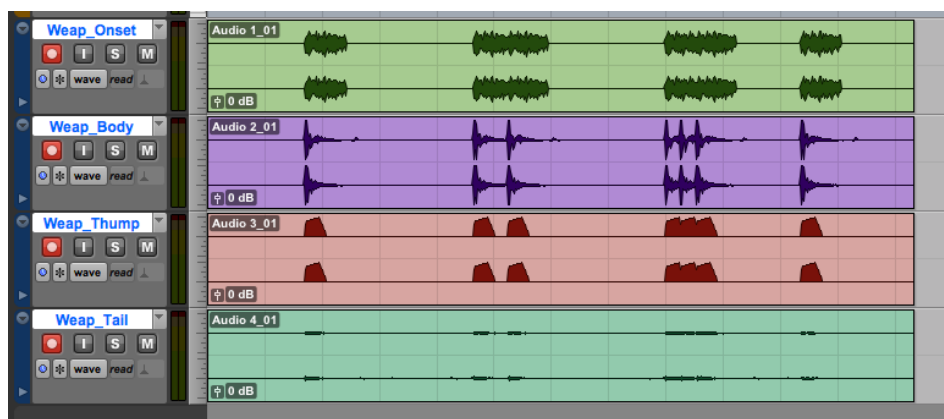
They should appear as in the screenshot on the left.

Arm the tracks, and your session, and press record/play.

The output will be recorded directly from the plugin into your DAW's timeline, post-fader, including all variations, FX etc.

This is ideal for mixing the outputs of the individual engines of Weaponiser, giving you even more control, allowing you to add your other favourite plugins on these audio tracks, or break out these tracks to an analog desk or control surface.

This feature also allows easy bouncing of each layer from within the plugin, ready for export into a game engine or audio middleware solution.



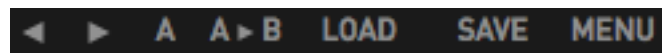
12 Presets

Weaponiser allows you to save and recall presets. It also comes with a huge range of presets for you to start using and to inspire your own designs.

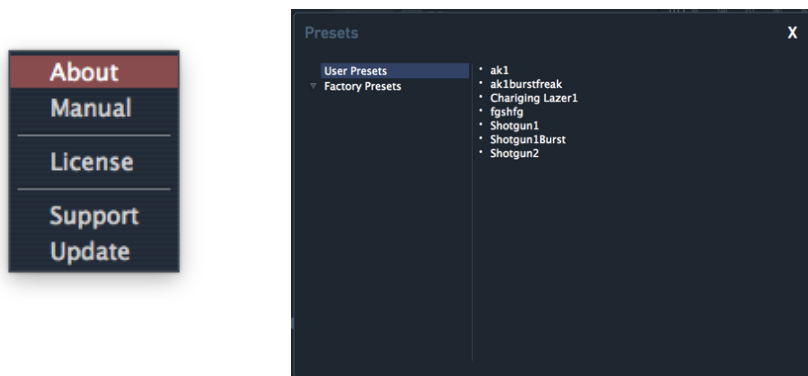
Click on the name of the preset in the top bar to load, save or alter a preset.



Use the arrows in the top bar, on the right-hand side to move through the presets, A>B settings, load a new preset or save your settings.



Clicking on 'Menu' will reveal other options. Here you can view the software license by clicking on 'License', with our FAQ and contact support by clicking on 'Support', or check if there are any updates available by clicking 'Update'.



13 FAQ

What is Weaponiser?

Weaponiser is the latest addition to Krotos' ever-expanding, innovative product range that enables you to easily design, layer and synthesize weapon sounds quickly but comprehensively - all within one plug-in. It combines high-quality recordings of real weapons with a flexible sample and synthesis system, allowing design of any complex weapon with a huge degree of variation at high speed.

How do I use it?

Weaponiser is a hybrid sample-synth instrument for weapon design, and more. Simply drag and drop samples from the file browser into the engines, activate the synth modules and press 'Fire'! Add effects using the mixer to adjust your mix and add impact to your settings. You can also explore our range of presets to get a clear idea of how the plugin can be used, and the range of sounds it can produce.

What does Weaponiser include?

Every version of Weaponiser includes the plugin in VST/AU/AAX format. The plugin includes four powerful sample engines, three synthesis engines, eight FX modules and a convolution reverb, in one elegant system. There are a variety of Weaponiser packages available, tailored for different needs and budgets, which add factory assets. Our Basic Pack includes a large quantity of weapon recordings for four weapons (AK47 Assault Rifle, Beretta Pistol, SPAS 12 Shotgun and Dragunov Sniper Rifle). Our Total Pack includes the contents of the Basic, and recordings of an additional nine more weapons. We use these assets to create presets, which can be used to quickly create 'designed' weapon sounds

Can I use sounds I design in Weaponiser in my film/TV/game project?

Yes. Anything designed with the plugin can be used in any of these projects without further licensing

Can I use my own assets/recordings?

Yes. You can add any samples into Weaponiser by dragging and dropping, or using the File Browser. Our presets and factory assets can be used for a huge range of weapon design, but if you have your own recordings or favourite samples, they can be used however you like.

Do you offer more presets from your website?

Not at this time, but we hope to add additional packs and content to our Weaponiser product range in the future. If you are a sound designer or weapon recordist and would be interested in working with Krotos to create a Weaponiser pack, please get in touch via sales@krotosaudio.com.

Can I use my own synths and effects?

Adding your own synths or plugins into the plugin, or part of the Weaponiser mixer is currently not supported. However, since Weaponiser is a midi-instrument, you can use the same midi triggers to trigger other soft synths or external hardware in sync with the plugin. You can also use Weaponiser's multi-channel routing, and mix the output from each engine on a separate track in your DAW or external mixing desk, allowing you to add your favourite plugins or processing chains seamlessly into your weapon design workflow.

Can Weaponiser be used for something other than Weapons?

Of course! Weaponiser is an extremely powerful and flexible sample/synthesis engine that can be used for a variety of sound design tasks. By layering your samples (and the factory assets) you can create UI, drum patterns, or other examples of sound design

Can I get a demo?

Yes! Weaponiser can be used for 10 days as a fully-functional demo without a license.

How do activate the demo?

You will only be able to evaluate the demo once on your iLok account. To start the demo, add Weaponiser to a track in your DAW. When the iLok popup appears, choose 'Try', and follow the procedure on-screen.

Log into your iLok account and choose a location. Your demo will now be active.

You will see a popup window again in 10 day's time, when your demo will expire. To continue to use the plugin and Analysis Tool, you will need to purchase a license from

<https://www.krotosaudio.com/products/reformer-pro/>

If you have any issues getting started, please contact support@krotosaudio.com

Is the demo different to the other versions of Weaponiser?

The only difference is that the demo includes far fewer assets and presets than other versions. Unfortunately, we cannot offer the full version of Weaponiser with a full library of factory assets for evaluation, because of the size of the library (1GB+). In every other way, the demo is identical to the full version of the plugin.

Weaponiser factory assets are 192khz, but can I use them at other sample rates?

Yes, you can run the plugin and the factory assets at any sample rate you like, and the plugin will resample on the fly, to maintain the original pitch and quality of the recordings. We recommend using higher sample rates in your DAW, especially when pitching samples down, as they will retain more high-frequency content and allow you to design better-sounding weapons.

Will there be "Simple" version of Weaponiser?

At this stage we intend to keep Weaponiser as an in-depth pro tool. However, we always welcome feedback from our users and the community, and we look forward to hearing your thoughts on how Weaponiser can develop as a tool for creative sound design.

Why is Weaponiser only available in 64-bit?

As a small team, we focus our resources on the most popular platforms and setups, so we can support our core users as best we can. We have found that the majority of our customers use our products in 64-bit. If there is a significant drive from the community for 32-bit support we will aim to support this as best we can in the future.

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An internet connection is required at the time of activation.

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4.1.2. that the Documents correctly describe the operation of the Software in all material respects,

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