

# TASCAM

## GIGAPULSE

is an all-new convolving reverb plug-in for Windows®. Running under the VST protocol, GigaPulse™ generates the most lifelike reverb that you've ever heard by using actual recordings made in acoustic spaces, including the tools to sample your own rooms. Our breakthrough technology adds microphone modeling, selectable room position and tail extension processing to the convolving engine for detailed control over the reverb sound. But the real revolution is the reverb quality – so realistic that samples, instruments and vocals come to life.





# TASCAM. GIGAPULSE™

## A wealth of pre-sampled impulses for enhancing your own creative product.

GigaPulse excels at breathing life into sampled instruments. If you're using a great-sounding sampler like GigaStudio, GigaPulse can make your arrangement sound more like a room full of musicians performing onstage. Many of the recorded impulses that ship with GigaPulse were made with orchestral music in mind, so there's an impressive collection of concert halls to choose from. Several Hollywood soundstages were also

recorded for film scoring with samplers.

We know that not everyone who buys GigaPulse is conservatory-trained, so we've included a collection of great drum rooms, reverb plates and echo chambers. There's also a selection of some of the best signal processors ever made, from digital reverbs to vintage tube EQs.



And we've included

a great set of modern and vintage microphone models from all of the top names in the business. As TASCAM releases more libraries, the list of impulses is sure to grow.

You can even search the internet for the network of musicians who have recorded their own signal processors and spaces and import these files into GigaPulse. We've Googled a few great freeware impulse libraries on the web, and more keep showing up every day. And of course, if you're a true do-it-yourself experimenter, you can record your own reverb, microphone and signal processor impulses for use in GigaPulse. Sound designers can even try adding non-reverberant sounds as impulses – convolution is such new technology that we're sure that a few new sounds are out there waiting to be discovered.

## Combine multiple impulses.

GigaPulse features a *Cascade* function, that allows you to "morph" two impulse recordings into one. Imagine combining a bright hall with a dark plate, combining the sound of both for the ultimate vocal reverb.

## Powerful convolution engine.

Most reverb effects processors are just a series of digital delays looping together.

*Convolution* offers a new way to produce reverb – it uses an actual recording of a room, much like sampling synthesizers use the recording of a guitar or a drum set to create realistic instrument sounds. You can import the recording, or "*impulse*", of any room, signal processor or other device for processing using the GigaPulse plug-in.

## Sample any acoustic environment.

The first step in creating a GigaPulse library is to record an impulse. Ideally, a speaker is set up in a room to play back a frequency sweep. But in larger spaces, a starter pistol is sometimes used to excite the space. The sweep is played, or the pistol fired, and the resulting impulse response is recorded. This recording is then imported into GigaPulse. When an instrument is played through GigaPulse, it applies the reverb recording to the input signal, and the result sounds like the instrument was played in that room.

Anything from ten thousand-dollar studio reverbs to large concert halls can be recorded for playback in GigaPulse. You can also use impulses of tube mic pres, telephones, car interiors, or just about anywhere else your imagination takes you.

## Perfect for film/video sound recording.

If you've ever recorded in the field with a boom mic in a reverberant room, you know how hard it is to duplicate the sound when you add replacement dialog or sound effects in post. Now when you're in the field, you can sample the acoustic environment of each set or location. Then during post, GigaPulse will let you apply the exact room reverb to dialog or effects.

## Model any microphone.

Big-budget Hollywood films have their scores recorded in the best rooms around the world, using vintage tube microphones to capture every detail. We wouldn't accept anything less than the warmest recording quality for our reverb plug-in, so TASCAM built *mic modeling* into GigaPulse.

Mic Modeling allows you to select any microphone from our all-star mic locker as the transducer for your virtual recording stage. Perhaps you're looking for a model based on a vintage Neumann® for a big orchestral sound, or maybe there's an RCA® ribbon mic that would add a smoky jazz feel to the recording.

Even if you're not using GigaPulse as a reverb processor, you can take advantage of the mic modeling feature. Maybe you can only afford a low-cost condenser mic, and you're wondering what it would sound like through the model of a megabucks AKG® tube mic.

Or perhaps you're looking for a different guitar sound than the one you recorded, and you want to experiment with a different microphone. Mic



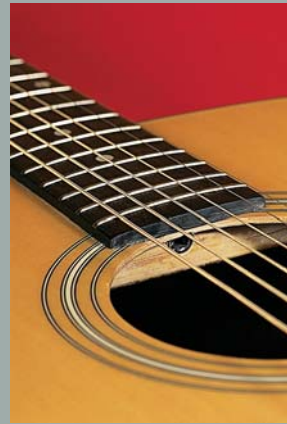
modeling gives you options after a track has already been recorded, and it can add warmth and high-end polish to low-budget home productions.

## Control microphone characteristics.

GigaPulse also gives you the kind of microphone control that's usually only possible by getting up and moving mics around. Mics can be individually balanced between each other, or even M/S decoded if the impulse was recorded as Mid/Side.

There's a *wet/dry* mix for each microphone to control the balance. You can change the perspective of the microphone, giving the impression that the source is moving closer to the mic.

*Perspective* gives you a similar effect to a wet/



The **Acoustic Space** window can update as you change the sound source location, or display a dimensional drawing of the space.

**Impulse Sets** are organized by bank.

Save a **Preset** with your custom edits.

Use **Cascade** to combine two impulses and create a new reverb

**Sim Stereo** spreads out mono impulses.

**Tail Extension** makes more efficient use of the processor

Position your sound source in the **Placement Selection** grid to choose an impulse take from one of 18 locations.

**Multi** lets you select a different location for each mic individually.

	MIC LEVEL	PRE-DELAY	WET/DRY MIX	PERSPECTIVE		
Both	MSDEC	MUTE	93	34	16383	996
Left	MUTE	66	51	7888	769	
Right	MUTE	66	66	7857	758	

Integrated **Mid/Side** decoding.

Change the **Perspective** to model the effect of moving a mic closer to the source, while maintaining imaging and phasing.

dry mix – simulating the effect of moving a mic closer to the source while keeping the stereo image and phasing consistent. All of these parameters add up to an unprecedented amount of control for a reverb convolution engine, and they can be saved as a preset for later use.

## Move sound around the “room.”

GigaPulse libraries have been carefully recorded with impulses taken in various locations in a room. Most have recordings with the source at the front of the room, near the back, on either side of the room, halfway up on the left, etc.

These multiple recordings – up to *eighteen* locations – give you the flexibility to place an instrument anywhere in a room or hall. You can arrange an orchestra the way they would naturally sit in concert, or try moving a piano around the room without breaking your back. You can select a different room location for the left and right mics individually for wide stereo tracks.

As you change the location in your room, the image at the top left of the plug-in can change to reflect the new position. You can also see where you are in the room using the two-dimensional grid. By clicking on a button to the side of the graphic display, you get a dimensional drawing of the space for reference.

Even if a room was recorded in mono, GigaPulse has the ability to create a stereo field from your impulse. *Sim Stereo* takes a mono source and spreads it out, complete with width and image controls.

You can even create reverb in surround by using multiple GigaPulse instances, changing the location for each plug-in, and outputting each GigaPulse to a different output buss.

## Lighten the load on your CPU

As you might expect, convolution takes a great deal of processing power. GigaPulse has a few features designed to give you the best of convolution-based reverb without grinding your PC to a halt.



Often, more than half of the impulse sample is under  $-80\text{dB}$ , too low to be heard in a mix. *Tail Extension* is a unique way to combine convolution with traditional reverb processing. It dynamically generates a reverb decay based on the real impulse recording. You get

controls like *Overlap*, which blends the convolution reverb with the Tail Extension-generated decay, plus *Level* and *Cutoff* to shape the balance and tone of the decay.

Tail Extension gives you the first half of the decay, the part you hear clearly, as a convolution reverb, while the rest of the decay is generated in a CPU-friendly process. When Turbo Mode is switched on, more CPU power is freed up so that you have room to run more GigaPulse plug-ins, soft synths or other software.

## Hear GigaPulse and you'll be sold.

Compare it to ultra-expensive convolving hardware boxes. Compare it to other convolution plug-ins that don't sound as good, don't run on the PC, or both.

Compare GigaPulse to the most expensive conventional hardware and software reverb processors.

Play with GigaPulse's exclusive sound location feature that gives you unprecedented control of a critical parameter that no standard reverb can effectively change. Imagine all of the unique impulses you could sample and apply to your work.

There's nothing quite like GigaPulse. Except maybe reality itself. ■

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