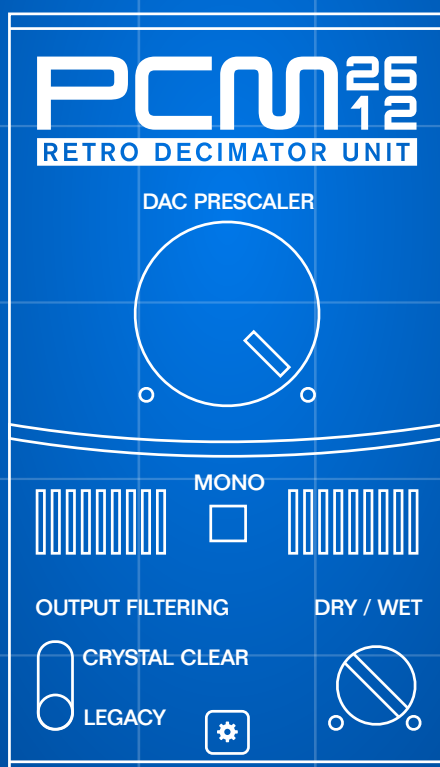




INPHONIK

PCM²⁶₁₂

RETRO DECIMATOR UNIT



USER MANUAL

Table of content

PCM²⁶₁₂

RETRO DECIMATOR UNIT

| | |
|-----------------------------------|----|
| Introduction | 3 |
| Installation | 4 |
| User support | 5 |
| Subscribe to our Newsletter | 5 |
| What is the PCM2612? | 6 |
| A feature taken from the RYM2612 | 6 |
| Controls | 7 |
| DAC Prescaler | 7 |
| Mono | 7 |
| Output Filtering | 7 |
| Dry/Wet | 7 |
| Settings | 8 |
| Parameter Value Keyboard Typing | 8 |
| Rack Version | 9 |
| Rack Back panel | 9 |
| End-User License Agreement (EULA) | 10 |
| Disclaimer | 13 |
| Credits & Thanks | 13 |

Introduction

The PCM2612 is the continuation of our work made on the RYM2612 Iconic FM Synthesizer, expanding its ecosystem. As much as the RYMCast Genesis VGM Player, the PCM2612 has a place of choice as a companion effect plug-in that completes our offer in the Sega sound emulation field.

We're proud of this little effect plug-in, since it resolves a problem we had with the RYM2612's PCM playback feature that not all DAW could use appropriately, due to its audio-in functionality that's not so common for an instrument plug-in.

The PCM2612 is as simple as possible: one FX, one knob. Yet, so much character! It's our tribute to the magnificence of the 8-bit sound. This decimated noise has shaped our youth. It was the mark of the prowess of the engineers and the artists who produced the classic video games and original soundtracks we still love today.

We like to believe our plug-in inspires you to make your favorite style of music.

Sincerely,
Your friends at Inphonik,
Mathieu Demange & William Lamy

Installation



VST2, VST3, AUDIO UNIT, AAX

<https://www.inphonik.com/products/pcm2612-retro-decimator-unit/>

| | |
|----------------|---|
| Windows | Minimal requirements: Windows Vista (64-bit) and higher |
| macOS | Minimal requirements: macOS 10.7 (64-bit) and higher |
| Linux | Minimal requirements: a 64-bit distro |

1. Download the installation program from your order confirmation email
2. Run the installation program
3. Choose the desired plug-in formats to install
4. Run your DAW and find the PCM2612 in the effects list



RACK EXTENSION (REASON STUDIOS)

<https://www.reasonstudios.com/shop/rack-extension/pcm2612-retro-decimator-unit/>

Windows / macOS Minimal requirements: Reason v10.1 and higher

1. Download the PCM2612 from the Reason Studios Shop
2. Recommended: sync your Rack Extensions for offline use
3. Run Reason and find the PCM2612 in the effects list

User support

Thank you so much for buying our product!

We're ready to assist if you need help!

Please go to: <https://www.inphonik.com/support/>

- Read our FAQ,
- Contact us for any information,
- Report a bug...

You can also get in touch with us on social networks:

<https://www.facebook.com/inphonik/>

<https://www.instagram.com/inphonik>

<https://www.twitter.com/inphonik>

<https://www.youtube.com/inphonik>

<https://soundcloud.com/inphonik/>



I N P H O N I K

Subscribe to our Newsletter

We value your privacy.

Receive new products announcements and promo codes.

Subscribe at:

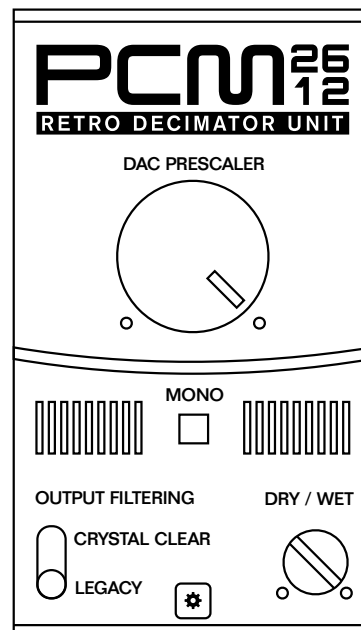
<https://www.inphonik.com/newsletter/>

What is the PCM2612?

The PCM2612 is a software bitcrusher effect plug-in. It is based on the decimation effect obtained with the Yamaha YM2612, best known for being the Sega Genesis / Megadrive video game console's sound chip.

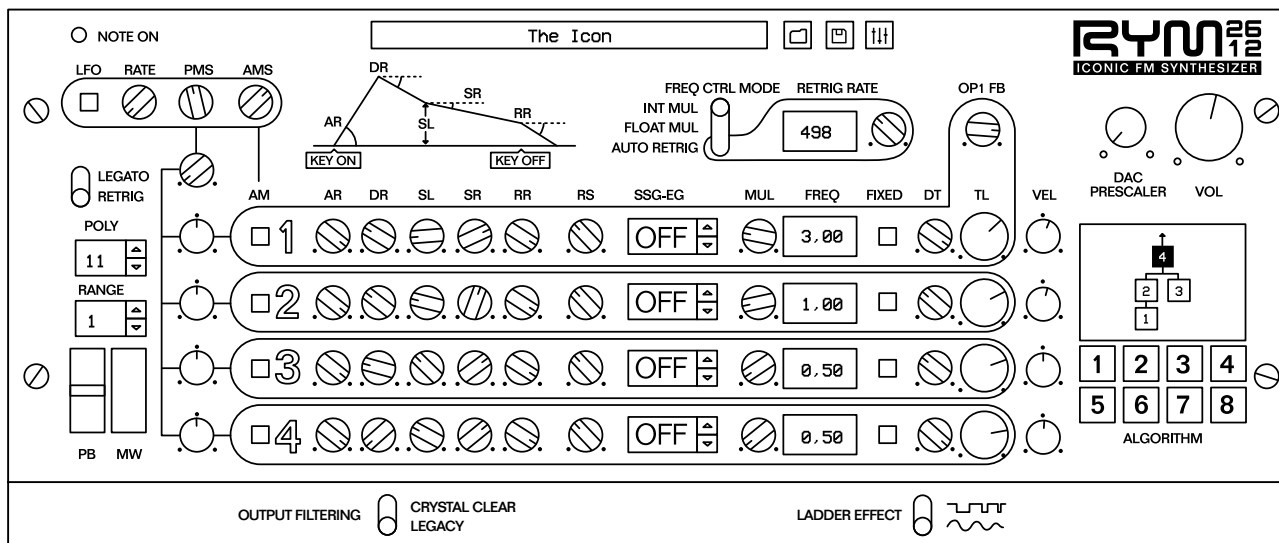
It gives a distinctive 8-bit quantized and aliased effect to any sound you plug into it. On one hand, it adds distortion due to the 8-bit quantization, and on the other hand it adds aliasing due to the resampling.

Also, the PCM2612 can emulate the line-out circuitry of the Sega Genesis Model 1, released in 1988.



A feature taken from the RYM2612

The 8-bit decimation effect is a feature of our RYM2612 Iconic FM Synthesizer. Since this feature wasn't possible with all DAWs, we chose to design a simple effect plug-in with this function only.

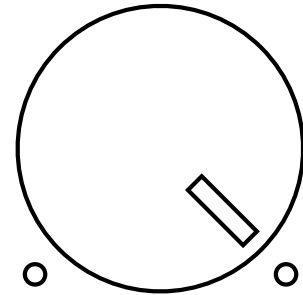


FINE-TUNING VALUES

To obtain more precise controls with the knobs, once the left mouse button is pressed, press simultaneously the Alt key (or Shift in Reason).

Controls

DAC PRESCALER



DAC PRESCALER

This big knob is the primary control for the 32 scales of the PCM playback's resampling frequency.

| VALUE | FREQUENCY | VALUE | FREQUENCY | VALUE | FREQUENCY | VALUE | FREQUENCY |
|-------|-----------|-------|-----------|-------|-----------|-------|-----------|
| 1 | 53,667 Hz | 9 | 5,963 Hz | 17 | 3,157 Hz | 25 | 2,147 Hz |
| 2 | 26,834 Hz | 10 | 5,367 Hz | 18 | 2,982 Hz | 26 | 2,064 Hz |
| 3 | 17,889 Hz | 11 | 4,879 Hz | 19 | 2,825 Hz | 27 | 1,988 Hz |
| 4 | 13,417 Hz | 12 | 4,472 Hz | 20 | 2,683 Hz | 28 | 1,917 Hz |
| 5 | 10,733 Hz | 13 | 4,128 Hz | 21 | 2,556 Hz | 29 | 1,851 Hz |
| 6 | 8,945 Hz | 14 | 3,833 Hz | 22 | 2,439 Hz | 30 | 1,789 Hz |
| 7 | 7,667 Hz | 15 | 3,578 Hz | 23 | 2,333 Hz | 31 | 1,731 Hz |
| 8 | 6,708 Hz | 16 | 3,354 Hz | 24 | 2,236 Hz | 32 | 1,677 Hz |

MONO

The mono button switches between stereo (turned off) and mono (turned on) operation mode. The mono mode sums both channels.

MONO

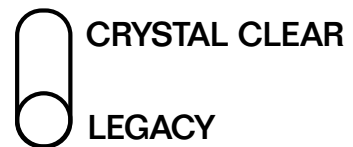


OUTPUT FILTERING

The output filtering switch gives a choice between two output modes:

- Crystal Clear is a direct digital output. It gives the highest frequencies.
- Legacy is the emulation of the line-out output of the Sega Genesis Model 1. It gives a warmer and rounder sound.

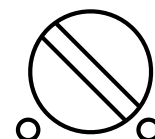
OUTPUT FILTERING



DRY / WET

DRY/WET

The dry/wet knob allows you to mix between unprocessed and processed sound.



Settings

(all versions except Rack Extension)

Click the gear button on the bottom of the PCM2612 to change the settings.



DISPLAY SCALING

If the PCM2612's graphical interface looks too small, you can make it bigger. Scaling factors available: 1x ; 1,5x ; 2x.

PCM2612 VERSION AND SYSTEM INFORMATIONS

Check PCM2612's version and system information that can help us if you submit a support request.

FORM FACTOR

Choose between vertical "Box" and horizontal "Rack" graphical interface. See "Rack version" section on the next page.

SUPPORT PAGE

Click this button to browse our support page.

Parameter value keyboard typing

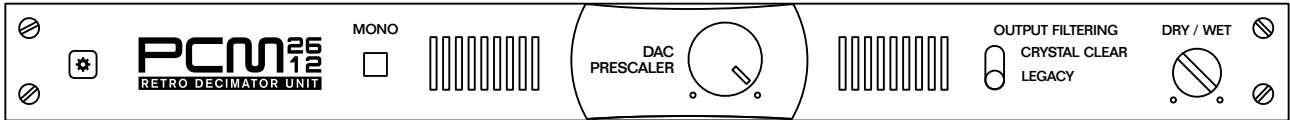
(all versions except Rack Extension)

If tweaking the knobs with your mouse is not precise enough for you, you can manually type the parameters with your keyboard.

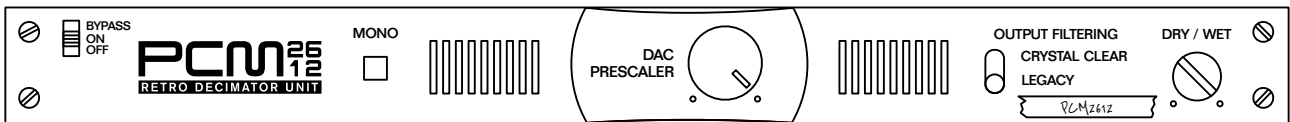
1. Double-click on a knob to pop-up an input field
2. Type in a value
3. Confirm with the Enter key

Rack version

The Rack form factor is suited for horizontal displays. It's the same interface that we developed for the Rack Extension version. It features the same controls as the Box version, in a sleek 1U interface.



Rack VST/AU/AAX version



Rack Extension version

Rack's Back Panel

(Rack Extension version only)



Reason users can enjoy an exclusive feature in the back of the Rack Extension version: the DAC Prescaler CV Input. Press Tab to access it.

End-User License Agreement

Last updated: March 07, 2018

Please read this End-User License Agreement (“Agreement”) carefully before clicking the “Agree” button, downloading or using PCM2612 Iconic FM Synthesizer (“Application”).

By clicking the “Agree” button, downloading or using the Application, you are agreeing to be bound by the terms and conditions of this Agreement.

This Agreement is a legal agreement between you (either an individual or a single entity) and Inphonik and it governs your use of the Application made available to you by Inphonik.

If you do not agree to the terms of this Agreement, do not click on the “Agree” button and do not download or use the Application.

The Application is licensed, not sold, to you by Inphonik for use strictly in accordance with the terms of this Agreement

License

Inphonik grants you a revocable, non-exclusive, non-transferable, limited license to download, install and use the Application strictly in accordance with the terms of this Agreement.

Restrictions

You agree not to, and you will not permit others to:

- license, sell, rent, lease, assign, distribute, transmit, host, outsource, disclose or otherwise commercially exploit the Application or make the Application available to any third party.
- modify, make derivative works of, disassemble, decrypt, reverse compile or

reverse engineer any part of the Application.

- remove, alter or obscure any proprietary notice (including any notice of copyright or trademark) of Inphonik or its affiliates, partners, suppliers or the licensors of the Application.

Intellectual Property

The Application, including without limitation all copyrights, trademarks, and other intellectual property rights directly related to the Application are, and shall remain, the sole and exclusive property of Inphonik.

Modifications to Application

Inphonik reserves the right to modify, suspend or discontinue, temporarily or permanently, the Application or any service to which it connects, with or without notice and without liability to you.

Updates to Application

Inphonik may from time to time provide enhancements or improvements to the features/functionality of the Application, which may include patches, bug fixes, updates, upgrades and other modifications (“Updates”).

Updates may modify or delete certain features and/or functionalities of the Application. You agree that Inphonik has no obligation to (i) provide any Updates, or (ii) continue to provide or enable any particular features and/or functionalities of the Application to you.

You further agree that all Updates will be (i) deemed to constitute an integral part of the Application, and (ii) subject to the terms and conditions of this Agreement.

Term and Termination

This Agreement shall remain in effect until terminated by you or Inphonik.

Inphonik may, in its sole discretion, at any time

and for any or no reason, suspend or terminate this Agreement with or without prior notice.

This Agreement will terminate immediately, without prior notice from Inphonik, in the event that you fail to comply with any provision of this Agreement. You may also terminate this Agreement by deleting the Application and all copies thereof from your computer.

Upon termination of this Agreement, you shall cease all use of the Application and delete all copies of the Application from your computer.

Termination of this Agreement will not limit any of Inphonik's rights or remedies at law or in equity in case of breach by you (during the term of this Agreement) of any of your obligations under the present Agreement.

Indemnification

You agree to indemnify and hold Inphonik and its parents, subsidiaries, affiliates, officers, employees, agents, partners and licensors (if any) harmless from any claim or demand, including reasonable attorneys' fees, due to or arising out of your: (a) use of the Application; (b) violation of this Agreement or any law or regulation; or (c) violation of any right of a third party.

No Warranties

The Application is provided to you "AS IS" and "AS AVAILABLE" and with all faults and defects without warranty of any kind. To the maximum extent permitted under applicable law, Inphonik, on its own behalf and on behalf of its affiliates and its and their respective licensors and service providers, expressly disclaims all warranties, whether express, implied, statutory or otherwise, with respect to the Application, including all implied warranties of merchantability, fitness for a particular purpose, title and non-infringement, and warranties that may arise out of course

of dealing, course of performance, usage or trade practice. Without limitation to the foregoing, Inphonik provides no warranty or undertaking, and makes no representation of any kind that the Application will meet your requirements, achieve any intended results, be compatible or work with any other software, applications, systems or services, operate without interruption, meet any performance or reliability standards or be error free or that any errors or defects can or will be corrected.

Without limiting the foregoing, neither Inphonik nor any Inphonik's provider makes any representation or warranty of any kind, express or implied: (i) as to the operation or availability of the Application, or the information, content, and materials or products included thereon; (ii) that the Application will be uninterrupted or error-free.

Some jurisdictions do not allow the exclusion of or limitations on implied warranties or the limitations on the applicable statutory rights of a consumer, so some or all of the above exclusions and limitations may not apply to you.

Limitation of Liability

Notwithstanding any damages that you might incur, the entire liability of Inphonik and any of its suppliers under any provision of this Agreement and your exclusive remedy for all of the foregoing shall be limited to the amount actually paid by you for the Application.

To the maximum extent permitted by applicable law, in no event shall Inphonik or its suppliers be liable for any special, incidental, indirect, or consequential damages whatsoever (including, but not limited to, damages for loss of profits, for loss of data or other information, for business interruption, for personal injury, for loss of privacy arising out of or in any way related to the use of or inability to use the

Application, third-party software and/or third-party hardware used with the Application, or otherwise in connection with any provision of this Agreement), even if Inphonik or any supplier has been advised of the possibility of such damages and even if the remedy fails of its essential purpose.

Some states/jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you.

Severability

If any provision of this Agreement is held to be unenforceable or invalid, such provision will be changed and interpreted to accomplish the objectives of such provision to the greatest extent possible under applicable law and the remaining provisions will continue in full force and effect.

Waiver

Except as provided herein, the failure to exercise a right or to require performance of an obligation under this Agreement shall not effect a party's ability to exercise such right or require such performance at any time thereafter nor shall be the waiver of a breach constitute waiver of any subsequent breach.

Amendments to this Agreement

Inphonik reserves the right, at its sole discretion, to modify or replace this Agreement at any time. If a revision is material we will provide at least 30 days notice prior to any new terms taking effect. What constitutes a material change will be determined at our sole discretion.

By continuing to access or use our Application after any revisions become effective, you agree to be bound by the revised terms. If you do not agree to the new terms, you are no longer authorized to use the Application.

Governing Law

The laws of France, excluding its conflicts of law rules, shall govern this Agreement and your use of the Application. Your use of the Application may also be subject to other local, state, national, or international laws.

Contact Information

If you have any questions about this Agreement, please contact us.

Inphonik
84 avenue Daumesnil
75012 Paris, France
contact@inphonik.com
<https://www.inphonik.com>

Entire Agreement

The Agreement constitutes the entire agreement between you and Inphonik regarding your use of the Application and supersedes all prior and contemporaneous written or oral agreements between you and Inphonik.

You may be subject to additional terms and conditions that apply when you use or purchase other Inphonik's services, which Inphonik will provide to you at the time of such use or purchase.

Disclaimer

The Sega and Yamaha brand names are the property of their respective owners and are in no way associated or affiliated with Inphonik and the software PCM2612 Iconic FM Synthesizer.

Logos of VST, NKS, Audio Units, AAX, Rack Extension and iOS are the property of their respective brands.

Protect your ears. Exposing them to high-pressure acoustic levels is a severe risk for your audition.

Credits & Thanks

The PCM2612 Retro Decimator Unit has been conceived, conceptualized and produced by Mathieu Demange, and co-designed by Mathieu Demange and William Lamy. Visuals and the PCM2612 logo have been produced by William Lamy.

ACKNOWLEDGEMENTS

For ages, the YM2612 retained attention and efforts of one of the most skilled and passionate reverse-engineering community ever. Many thanks go to Jarek Burczynski, Tatsuyuki Satoh, Stéphane Dallongeville, Nemesis, Shiru, TmEE, Eke-Eke, AamirM, Charles McDonald, Aly James and all the regular people at spritesmind.net and smspower.org, MG The Future, Shnabubula, Joey Luck, Noel Gonzalez, God of Rainbows, Yoann Turpin, ABC du Beatmaking, Ali Ahmet. Many thanks also go to all testers who helped making the RYM2612 a better product and also showed invaluable support during development.

VISIT OUR WEBSITE!

<https://www.inphonik.com/>

FOLLOW US!

<https://www.facebook.com/inphonik/>

<https://www.instagram.com/inphonik>

<https://www.twitter.com/inphonik>

<https://www.youtube.com/inphonik>

<https://soundcloud.com/inphonik/>



I N P H O N I K

www.inphonik.com