



# Malevolent

Modular Pure Analogue Synthesiser

## PWM Malevolent

Thank you purchasing Malevolent, the Modular Pure Analogue Synthesiser from PWM.

Malevolent is everything you want from a true analogue design yet will sit happily in your studio with USB-C, MIDI and Clock I/O, and easy interfacing between digital and analogue worlds. All this is achieved without compromise on the analogue side as Malevolent has two proper VCOs derived from a 4046-based core that will sing and snarl in equal measure!

The opto-FET controlled 2-pole Sallen-Key filter will whistle and burble unlike anything you can get out of a digital model. Indeed this is the whole point of Malevolent - it lives and breathes.

We hope you will enjoy learning to master the Malevolent's controls including the joystick which has variable-rate vibrato and variable-speed glide as well as pitch bend.

Malevolent is an instrument to be learned and loved. We love it. We hope you do too!

# Getting Started

This guide will help you get set up and making your first sound with Malevolent.

As it is an analogue synth please do read through this guide to help your first experience go as smoothly as possible.

1. Check your box contents
2. Connect power
3. Connect headphones or speakers
4. Making your first sound
5. What to try next
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## 1. Check Your Box Contents

Malevolent comes with the following in the box. If anything is missing please contact your retailer immediately.

- The PWM Malevolent Synthesiser
- This guide 😊
- 9V DC 600mA Power Supply (with interchangeable heads to suit your country)
- USB-A to USB-C Cable
- 5x 3.5mm Patch Cables in lovely colours

## 2. Connect Power

Remove the Malevolent from its packaging and set it down on a nice flat surface.

Remove the Power supply from its box - you will find it inside of one of the foam end pieces in the box. Have a look through the included interchangeable heads and select the correct one for your country. Carefully clip this on.

Make sure the Malevolent is switched off.

Connect the small end of the wire to the power socket on the back of the Malevolent and plug the Power Supply in to an available mains socket.

Switch on Malevolent and you will see some of the LEDs light up. The LFO LED will be flashing.

*Note: Malevolent can be bus-powered from USB if that is more convenient. We recommend using the Power Supply first time though to make sure everything is working correctly.*

### 3. Connect Headphones or Speakers

- Malevolent has a Line Out ¼" TS jack on the rear panel for connecting to a mixer, amplifier or powered speaker.
- It has a headphone ¼" TRS jack on the rear panel for connecting headphones.

We recommend you connect the synth in one of the above ways to hear it. Make sure the 'Master Vol' is first turned all the way down.

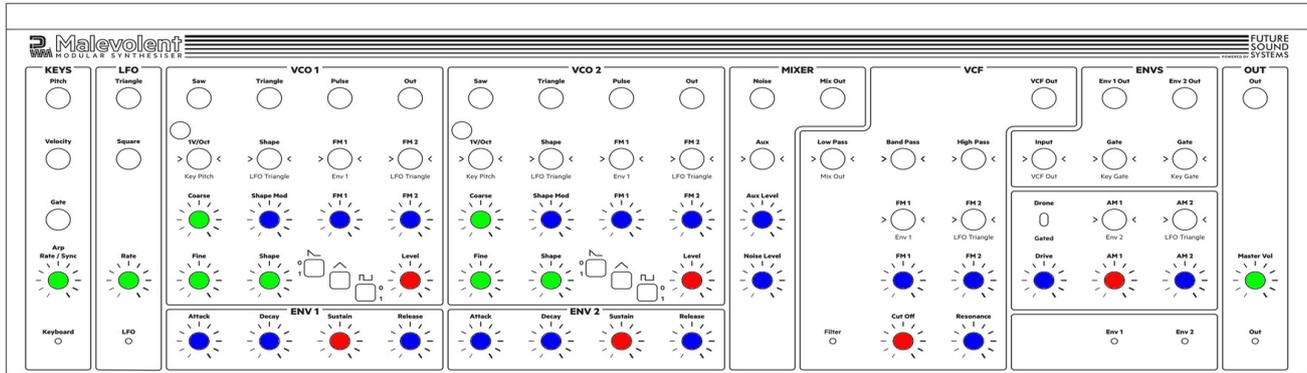
*Note 1: Malevolent can be LOUD depending on where the controls have been left. Please be careful and take things steady when you first turn up the master volume.*

*Note 2: Malevolent also has a 3.5mm Out socket on the top panel for patching into other modular gear. Please take care if using this socket because its level is not affected by the Master Volume control.*

*Note 3: Please make sure your amp and speakers are turned down low when Malevolent is first switched on. It can create loud transients!*

## 4. Making your First Sound

a) Looking at the guide below set the knob positions as follows:



**Blue** are at minimum or turned fully anti-clockwise  
**Red** are at maximum or turned fully clockwise

**Green** are at mid-position or 12 o'clock

b) Next press one of the wave select buttons in the VCO 1 section to turn it on.  
The LED will light up.

c) Now play the keyboard. You will hear Oscillator 1!

## 5. What to try next...

### Suggestions:

- Press one of the wave select buttons in the VCO 2 section to turn it on (LED lights up). Now when you play you'll hear both oscillators
- Try different combinations of waveforms by turning them on and off in each VCO section
- Use the Coarse and Fine tune controls to tune your oscillators - in tune or out of tune!
- Add some release to ENV 2 to make your sound a little less abrupt when you let go of a key
- Turn up the Resonance in the VCF section and slowly turn down the Cut Off while playing. Add some Drive to enhance the effect

## 6. Tuning Tips

Malevolent is made using true analogue electronics. This means its tuning may not be perfect when you first receive it. Because of this we have added a couple of useful features to help you set tuning for your environment.

Malevolent includes temperature-compensating components to make tuning as stable as possible but it is a good idea to allow a minute or two before you start tuning.

Hold down the 'Vibrato' button and press and release a key in the middle of the keyboard. You will hear a repeating pattern of notes including the note you've played, a note one octave above and a note one octave below.

Continue to hold the 'Vibrato' button while gently tapping the Octave + or - buttons to stretch or shrink the octave tuning. When you are satisfied release the 'Vibrato' button. If, during tuning, you get lost then press both Octave buttons together to reset to the factory default setting. Your tuning adjustments will be saved automatically.

Please check the [PWM](http://PWM) website for further information.

## 7. USB-MIDI and Additional Functions

Malevolent is a class-compliant USB device which means it can be connected to your computer via USB and will your computer will recognise it automatically without the need to install additional drivers.

It can be used as a standard controller keyboard and the joystick will transmit Modulation and Vibrato messages which can be used to control any soft synth or other MIDI instrument. The HOLD function also works over USB-MIDI and Malevolent can be used as a polyphonic MIDI controller even though it is a mono-synth.

When using USB or MIDI In, Malevolent receives and transmits messages on MIDI Channel 1 by default. This can be changed by holding down a key on the keyboard while powering on where the lowest 'F' selects MIDI Channel 1 and the highest 'G' selects channel 16. Channel selection is remembered over a power-cycle.

Malevolent has a Local Off mode which you can enable by holding down 'Arp' while powering on. The status of Local Off mode is not saved when you switch off.

To reset MIDI Tx/Rx Channel, Stretch tuning value, Pitch Bend range and HOLD mode to factory defaults, hold down the top 'C' on the keyboard while switching on.

## 8. Troubleshooting

If you encounter any problems then please check out the Malevolent web page first at: [www.1pwm.com/malevolent](http://www.1pwm.com/malevolent). We aim to always keep this up to date with help and useful info.

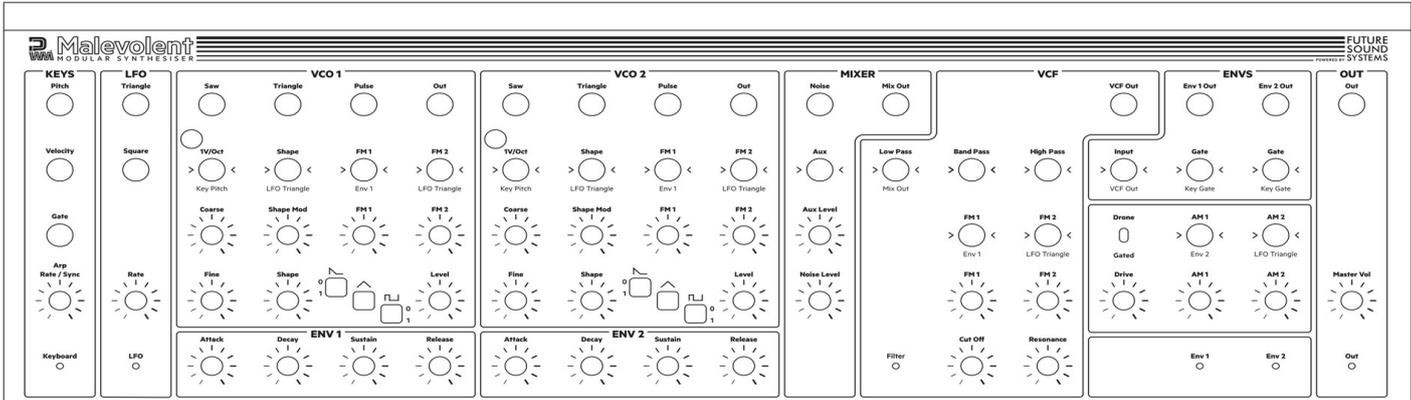
If you're still having difficulties then details of how to contact us can be found on our website: [www.1pwm.com](http://www.1pwm.com).

## 9. Warranty

Malevolent comes with a 1 year Manufacturer's warranty from the date of purchase.

**PLEASE NOTE:** Please do not insert anything into the trim pot holes located just above the 1V/Oct jacks in each of the VCO sections. These trim pots are for *Manufacturer and Service use only*. Insertion of *anything* into these holes will invalidate your warranty. Basically, we set these trim pots up at the factory and you shouldn't need to tweak them. If you feel you have a problem though, please do get in touch. Thanks 🙌

# 10. Blank Patch Sheet



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