

# Reduce low RPM fan noise MultiPlus-II, EasySolar-II & Quattro-II v2

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www.victronenergy.com

## 1. Introduction

The fan in the earlier MultiPlus-II, EasySolar-II and Quattro-II units can be noisy, especially at low fan speeds.

The electronics design in the recent MP-II/ES-II/QUA-II units has been improved, fixing this problem.

For the earlier units, we now have a small PCBA available that can be retrofitted to an existing unit without having to take a unit from the wall.

Installing the Fan PWM converter will reduce noise for all fan speeds except full speed. In other words, at 100% fan speed, there is no difference between the old and the new situation. Same with the improved electronics in the MP-II/ES-II/QUA-II units: fan control when running at reduced speeds has a problem which is now fixed.

## 2. Affected models and serial numbers

All units with a serial number before and including the serial number listed below have the issue electronics; which can be solved by the retrofit.

All units with a newer serial number, or units not listed below, feature the improved fan control. Mounting the retrofit kit in such unit, will not further reduce the noise level.

Part number	Article description	Affected serial nrs (up to and including) <sup>(1)</sup>
PMP122305010	MultiPlus-II 12/3000/120-32 230V	HQ2236
PMP122305100	MultiPlus-II 12/3000/120-50 2x120V	All
PMP122305102	MultiPlus-II 12/3000/120-50 2x120V (UL)	HQ2226
PMP122305110	MultiPlus-II 12/3000/120-50 120V	All
PMP122305120	MultiPlus-II 12/3000/120-50 120V	All
PMP242305010	MultiPlus-II 24/3000/70-32 230V	HQ2227
PMP242305100	MultiPlus-II 24/3000/70-50 120V	HQ2231
PMP242305130	MultiPlus-II 24/3000/70-50 2x120V	HQ2231
PMP242306000	MultiPlus-II 24/3000/70-32 230V GX	HQ2230
PMP242307010	EasySolar-II 24/3000/70-32 MPPT 250/70 GX	HQ2230
PMP242505010	MultiPlus-II 24/5000/120-50 230V	HQ2229
QUA242505010	Quattro-II 24/5000/120-50/50 230V	HQ2229
PMP482305010	MultiPlus-II 48/3000/35-32 230V	HQ2225
PMP482305100	MultiPlus-II 48/3000/35-50 120V	All
PMP482306000	MultiPlus-II 48/3000/35-32 230V GX	HQ2227
PMP482307010	EasySolar-II 48/3000/35-32 MPPT 250/70 GX	HQ2228
PMP482505010	MultiPlus-II 48/5000/70-50 230V	HQ2224
PMP482506000	MultiPlus-II 48/5000/70-50 230V GX	HQ2230
PMP482507010	EasySolar-II 48/5000/70-50 MPPT 250/100 GX	HQ2227
QUA482504010	Quattro-II 48/5000/70-50/50 230V	HQ2229
PMP482805000	MultiPlus-II 48/8000/110-100/100 230V	HQ2231
PMP483105000	MultiPlus-II 48/10000/140-100/100 230V	HQ2228
	All other models	Better fan control from start of production

(1) Format of the serial number is HQyywwzzzz in which yy is the year, ww is the week number, and zzzz is random. The serial number (SN) can be found on the label on the enclosure, on the label on the carton and in the VictronConnect App.

## 3. Solution

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**For MultiPlus-II 3kVA and 5kVA units:** install the Retrofit kit,

1x SPR00090 – PCBA MGR50\_MP\_II fan PWM converter 40KHz, to reduce the fan noise at low RPM.

**For MultiPlus 8kVA and 10kVA units:** install 2 Retrofit kits,

1x SPR00090 – PCBA MGR50\_MP\_II fan PWM converter 40KHz

and

1x SPR00091 – PCBA, MGR50\_MP-II 8/10kVA fan PWM converter 40kHz, to reduce the noise of both fans at low speed.

Distributors can order the fan PWM converter PCBAs free of charge. Find them on E-Order as part number SPR00090 and SPR00091. Ramping production of these PCBAs will take time, don't over stock this part.

In case you are an installer or end-user, please contact your dealer.

# Appendix – Retrofit instructions

Installation of the fan PWM converter PCBA(s) is easy and will take approximately 10 minutes of your time:

1. Turn the unit off by switching the I-O-II switch to the 0 (Off) position.
2. Disconnect the AC and DC cables from the inverter.

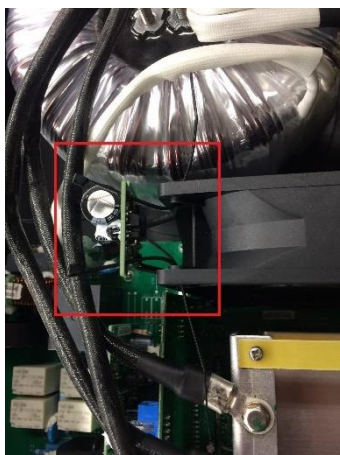
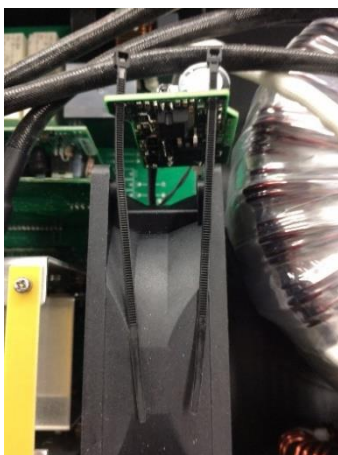


Make sure to disconnect the unit from the AC and the DC voltage before starting the installation of the fan converter PCBA.

3. Open the unit by removing the lower black connection cover and the blue front cover/lid.
4. Disconnect the white fan connector from the main PCBA. This connector can be found directly next to the fan. (see circled in red below).



5. Mount the SPR00090 fan PWM converter PCBA (with the short wires) with the supplied tie-wraps to the mounting eyes/holes of the fan. Connect the wire of the fan to the connection on the new fan control PCBA. Plug the connector of the new PWM converter PCBA to the original fan connector on the main board, as shown on the pictures below.



6. For the MP-II 8kVA and 10kVA units, the 2<sup>nd</sup> fan PWM converter PCBA (SPR00091) can be placed as shown on the pictures below. The longer wires of SPR00091 allow this fan converter PCBA to be mounted on top of the fan, as shown on the pictures below.



7. Check carefully that the converter PCBA(s) are installed correctly. Reconnect the AC and DC cables, replace covers and switch the unit ON to test. Put the inverter or charger under maximum load to test the fan(s).