

## 600W FM PALLET AMPLIFIER (48V)

# Manual

## IMPORTANT NOTE

**- Upon receiving your order inspect the packaging material and unit for any damage. Any damage should be reported immediately at the time of delivery so we can make a claim with the shipping company. Take photos and have delivery personnel fill out a report and sign it, these can be used as a proof.**

**IMPORTANT! Before you power up an amplifier/transmitter please first make sure that drive power is set correctly and does not exceed absolute maximum (for amplifier). Also ensure proper heat dissipation and do not exceed rated maximum supply voltage. Make sure all fans are running (they could be damaged during transit).**

**- Mains cables are typically not included with our mains power supplies and units. Since these cables vary from country to country and we had trouble finding the exact type we decided against including them, especially since finding them is so easy and cheap locally. They can be obtained in any radio/computer/hardware shop. It is the type used in your PC for mains power.**

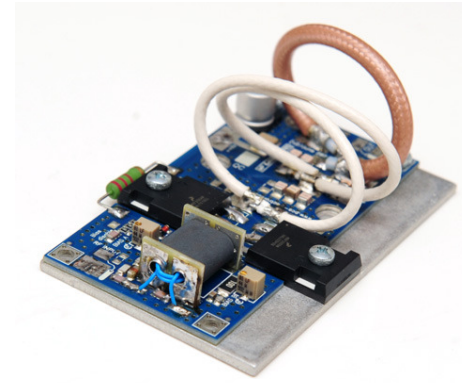
**- Study local regulations and ensure you are always operating in compliance.**

**- Do not open the unit or attempt service yourself. Deadly mains voltage may be present inside. There are also high RF voltage points that can cause burns and discomfort if touched.**

**- Finally, never ever operate any transmitter or amplifier without a properly tuned antenna!**

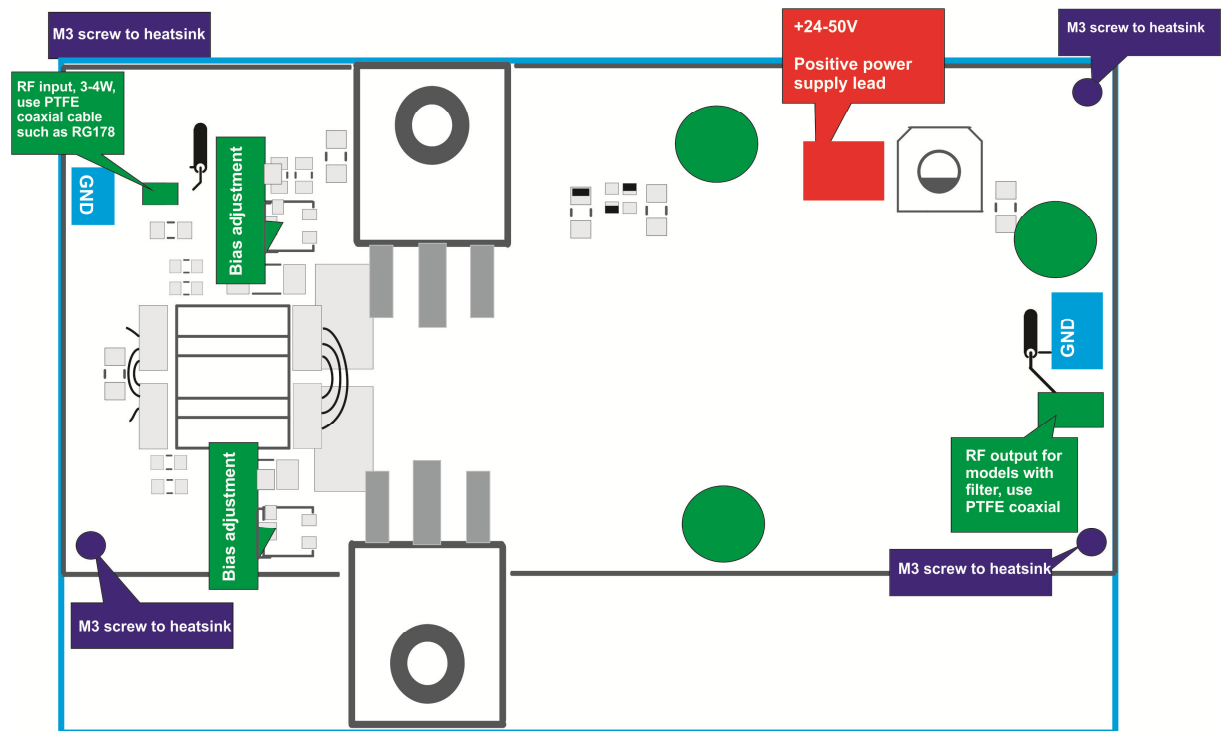
This 600W pallet has been designed for applications requiring no-tune wideband operation at >500W in small and reliable form factor. It can produce full output power from about 3-4W.

- 87,5-108MHz, will work from 80-120MHz with reduced power (ask for other bands)
- Max output power: 600W @100MHz @50V typ
- Rated output power: 500-550W typ
- Supply voltage/current: 48-50V DC, ~13A max
- Absolute maximum voltage: 50V
- Input: 50 ohm, SWR 2:1 max
- Output: 50 ohm
- Drive power required: 3W typ, 4W max (monitor output at all times to prevent overdrive!)
- No bias adjustment or tuning is necessary
- Size LxWxH: 90x56x45mm

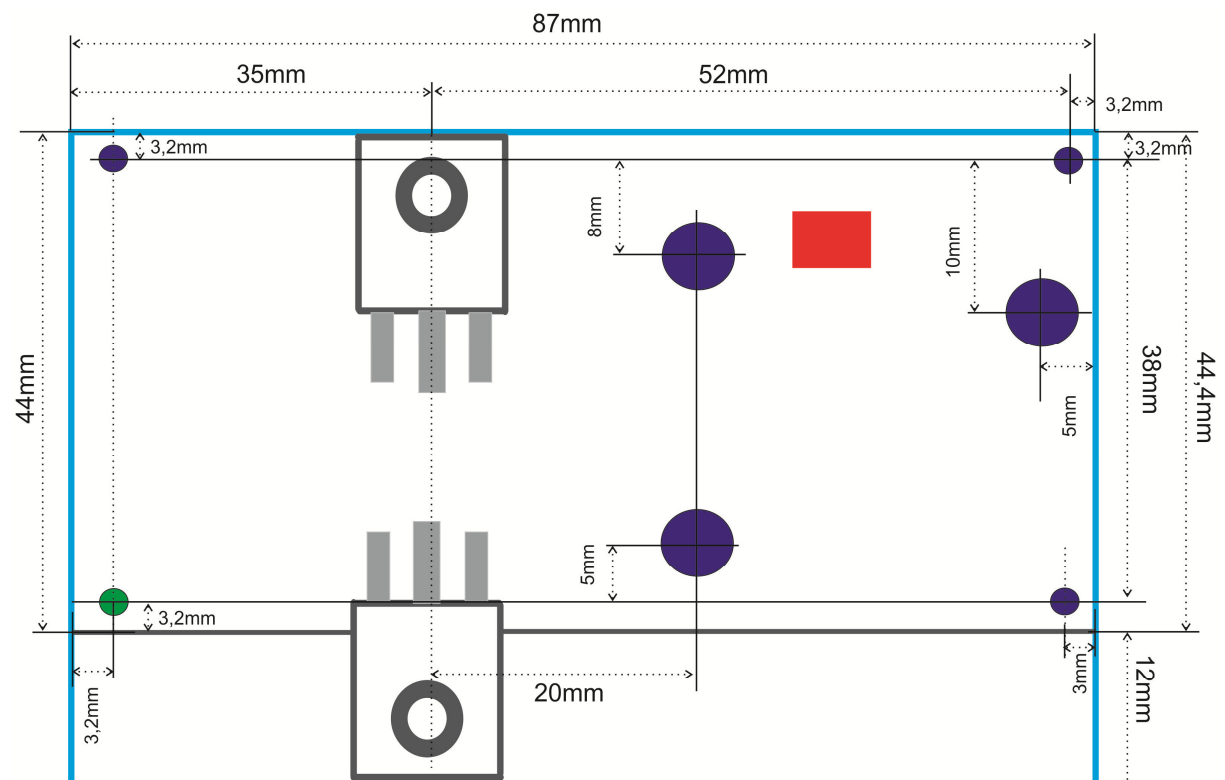


Dimensions: 90x56x45mm (LxWxH)

Specifications				
Parameter	Min	Typ	Max	Unit
Operating frequency range	87.5		108	MHz
Output power <sup>(48V, 3,5W drive)</sup>	470	540	490	W
Output power <sup>(50V, 3,5W drive)</sup>	510	605	550	W
Current draw <sup>(48V, 3,5W drive)</sup>	11,2A	11,8A	10,9A	A
Current draw <sup>(50V, 3,5W drive)</sup>	12,0A	12,2A	11,6A	A
Input return loss		-20		dB
Input drive power		3	4	W
Power gain		>22		dB
Supply voltage	30		50	V
Current draw (no drive)		~50		mA
F2		-28		dB
F3		-14		dB



Board layout and connections



Dimensions

Warning: Do not exceed maximum supply voltage of 50V or damage may occur.

Note 1: Please use teflon coaxial cable for RF input (RG178 is perfect) and output (RG142 or similar is perfect) connections, this makes it possible to have very short leads without burning the coax. Keep the coax leads as short as possible (few mm at most). Also keep leads short on connectors, this N female flange for RG142 or .141 semirigid – easy install is perfect!

Note 2: A small heatsink is definitely needed!

## Revisions and errata

V1.0 (June 2022): Release version of new manual format

Please report any errors you see in this manual, you will be helping us and many other users out there.  
Thank you

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