

## 300W FM Linear Amplifier

Designed for the FM Broadcast Radio Band 87.5 - 108.0 MHz this Linear Power Amplifier incorporates switching technology and MOS-FET device to enhance ruggedness and reliability.



- o 87.5 - 108.0 MHz
- o Input / Output : 50 Ohm
- o Pout : 300W (24/365)
- o Class B 100mA Idq
- o Total Efficiency : 65% typical
- o Digital protection circuits
- o Digital measurements
- o Low Pass Filter included

ELECTRICAL SPECIFICATIONS ( Heatsink Temperature = 45 °C, 50 Ohm loaded, Vmain = 220 VAC, Pout 300 W )

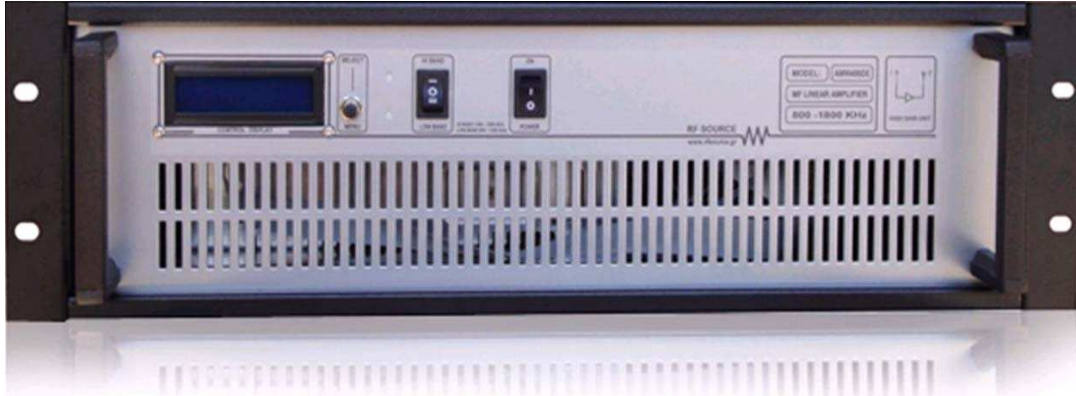
| Characteristics      | Min.    | Typ. | Max.    | Unit |
|----------------------|---------|------|---------|------|
| Frequency            | 87.5    |      | 108.0   | MHz  |
| Output Power         |         | 300  |         | Watt |
| Input Power          |         | 4.0  |         | Watt |
| Power Gain           |         | 19   |         | db   |
| Current Drain        |         |      | 2.5     | Amp. |
| RF Module Efficiency |         | 75   |         | %    |
| Overall Efficiency   |         | 60   |         | %    |
| Input VSWR           | 1.2 : 1 |      | 1.6 : 1 |      |
| Spurious             |         |      | -65     | db   |
| Harmonics            |         |      | -55     | db   |

The AFM300D Digital Power Amplifier covers the entire FM Broadcast Band in the range of 87.5 ~ 108.0 MHz.

It can deliver 300 Watt at 50 Ohm Load ( full 24H 365Days )  
The LCD screen of AFM300D displays RF Power Forward and Reflected , Heatsink temperature and also displays Alarm reasonsof any kind of malfunction.

The AFM300D has protections from high VSWR , Over output Power , Over Temperature , Power Supply malfunction .  
When an Alarm gets activated, the controller restarts the Amplifier's operation three times every 3 minutes. If this procedure fails to solve the malfunction, the Amplifier goes to STBY mode. The AFM300D needs 220VAC or 110VAC (selectable by internal switch) to operate and its weight is 12Kg max.

- o **19" Rack Mounted 3U High**
- o **LCD screen 2 X 16 character** numerically and analog bar display
- o **Digital readouts**
- o **Digital controlled** on screen messages
- o **300 Watt Output 24H/365D**
- o **Hi Gain 4 Watts drive input**
- o **High Efficiency Switching Power Supply**



## 1. Preliminary Instructions

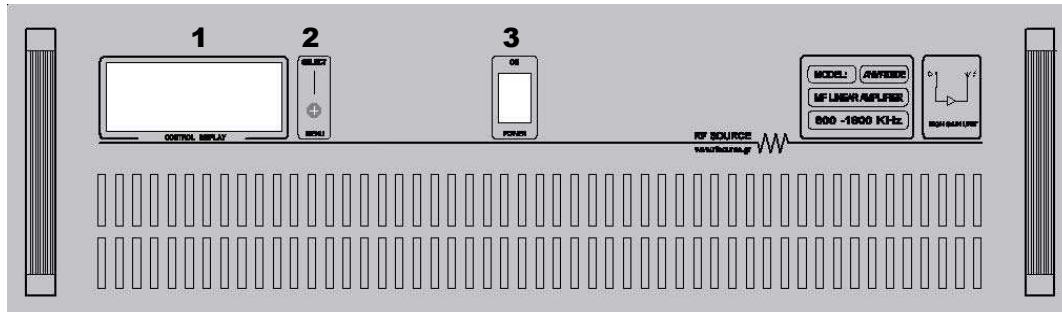
### • General foreword

The equipment in object is to considering for uses, installation and maintenance from “trained” or “qualified” staff, they conscious of the risks connected to operate on electronic and electrical circuits electrical. The “trained” definition means staff with technical knowledge about the use of the equipment and with responsibility regarding the own safety and the other not qualified staff safety place under his directed surveillance in case of works on the equipment. The “qualified” definition means staff with instruction and experience about the use of the equipment and with responsibility regarding the own safety and the other not qualified staff safety place under his directed surveillance in case of works on the equipment.

**WARNING:** The machine can be equipped with an ON/OFF switch which could not remove completely voltages inside the machine. It is necessary to have disconnected the feeding cord, or to have switched off the control panel, before to execute technical operations, making sure himself that the safety connection to ground is connected. The technical interventions that expect the equipment inspection with circuits under voltage must be carry out from trained and qualified staff in presence of a second trained person that it is ready to intervene removing voltage in case of need. RF Source-Greece doesn't assume responsibility for injury or damage resulting from improper procedures or practices by untrained/unqualified personnel in the handling of this unit.

**WARNING:** The equipment is not water resistant and an infiltration could seriously compromise its correct operation. In order to prevent fires or electric shocks, do not expose the equipment to rain, infiltrations or humidity. Please observe all local codes and fire protection standards during installation and use of this unit.

**WARNING:** The equipment has to its inside exposed parts to risk of electric shock, always disconnect power before opening covers or removing any part of this unit. Fissures and holes are supplied for the ventilation in order to assure a reliable efficacy of the product that for protect itself from excessive heating, these fissures do not have to be obstructed or to be covered. The fissures doesn't be obstructed in no case. The product must not be incorporated in a rack, unless it is supplied with a suitable ventilation or that the manufacturer's instructions are been followed.



- o 1) 2 X 16 character LCD backlight Display
- o 2) MENU Button
- o 3) Power ON - OFF Switch

### Quick guide for use

#### Screenshots



1) Welcome screen after Power ON.



2) Push the MENU button once to go to the Forward and Reflected RF Power measurement screen.



3) Push the MENU Button again. This screen shows only the Forward RF Power numerically and also with analog bars.



4) Push the MENU Button again. This screen shows only the Reflected RF Power numerically and also with analog bars.

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5) Push the MENU Button again. This screen shows the PA's heatsink temperature.



6) Push the MENU Button again. This screen shows only the Unbalanced RF Power numerically and also with analog bars.



7) This screen appears only when Overload Alarm gets activated ( Forward RF Power >320.0 Watts ). The RF output shuts down.



8) This screen appears only when HI SWR Alarm gets activated ( Reflected RF Power > 30.0 Watts ). The RF output shuts down.



9) This screen appears only when HI Unbalance Alarm gets activated ( Unbalance RF Power > 40.0 Watts ). The RF output shuts down. (Not available in this model)

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