

AmpDiVa



VuMETRON VOLI

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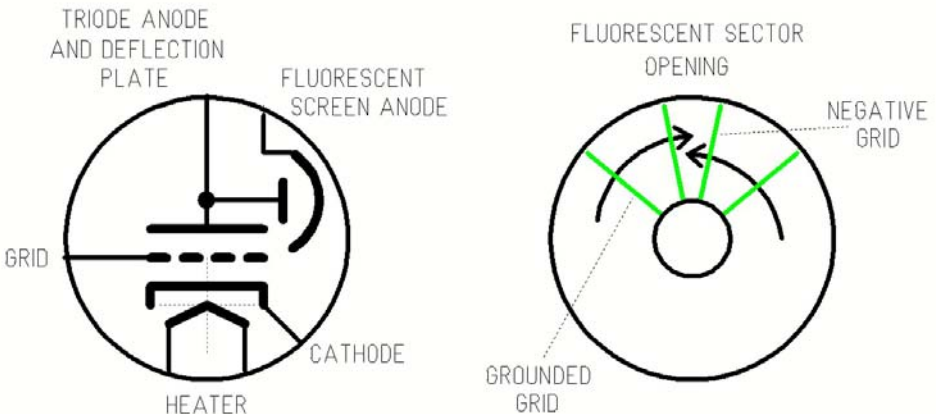
VuMETRON-VOLI

Magic Eye Environmental Vu-Meter.

The Magic Eye is an electron tube developed during the thirties of the '900. Thanks to a small fluorescent screen, it allows the viewing of an electrical quantity replacing the moving needle of an electromechanical instrument. It's a real electrostatic deflection Cathode Ray Tube similar to those used on the oscilloscopes, even if in a minimal simplified version with one single deflection plate and without the electrons beam focusing electrodes.

The tube used on the *VuMETRON-VOLI*⁽¹⁾ is a VT-138 (aka 1629) manufactured by RCA and Silvana; it comprises an amplifying triode with its anode directly controlling the deflection electrode.

VT-138

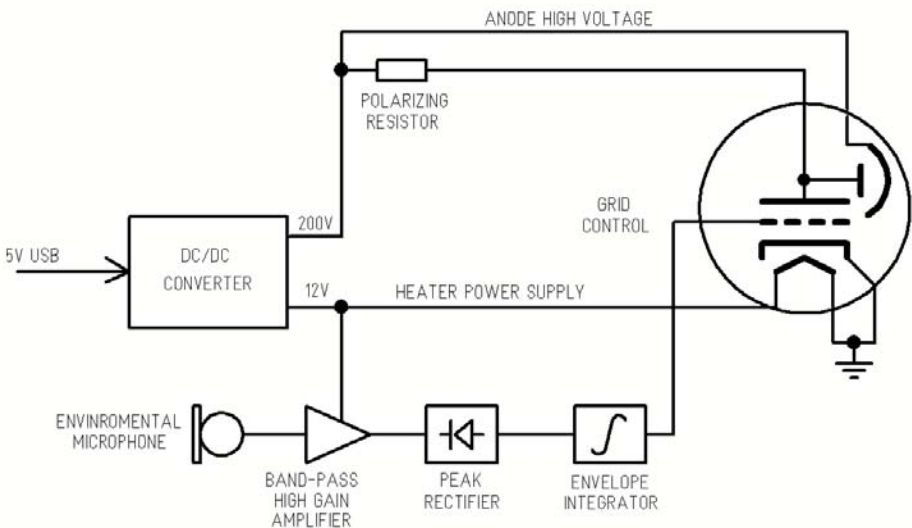


⁽¹⁾ "Voli" means "eye" in Friulano, the language spoken in the Italian region Friuli

The circuit that turns on the unit is powered by 5Vdc from a common USB mobile phone charger; a DC/DC switching converter steps up this voltage to 12V for the tube heater and by a diodes doubler to approx. 200V for the triode anode and the fluorescent screen.

The 12V voltage is used also to power a multiple feedback band-pass (100Hz to 10KHz) amplifier that apply a x1000 gain to the signal coming from the environmental microphone.

The audio signal from the amp output is fed to a diodes voltage doubler that clamps to GND the positive peaks of the signal and then filtered by a low-pass integrator to obtain the audio signal envelope with negative values suitable to control the triode grid.



The 5Vdc power supply requires approx. 700mA and is short-circuit protected by a PTC self-recovery fuse.

DISCLAIMER NOTICE

ELECTROMAGNETIC COMPLIANCE

This electronic unit is a prototype for evaluation purposes.

The user recognizes this evaluation prototype is not FCC or other Regulatory Bodies approved for resale and in some circumstances can produce interference to radio communications.

The user can avoid this interference moving away the unit from the involved radio system.

DANGER – HIGH VOLTAGE

This electronic unit uses 200..300V to power the Magic Eye electron tube.

Do not open, disassemble, remove the cabinet cover panels.

Do not use in humid environments, close to flammable substances or in explosive atmosphere !

DO NOT USE IN CASE OF BROKEN GLASS.

Inner high voltage electrodes became accessible !

End of Life Disposal

Dispose the unit according the local laws about the recycling of electronic equipments by taking it to the appropriate collection centers.

The *VuMETRON-VOLI* is designed, assembled and tested in Italy.