

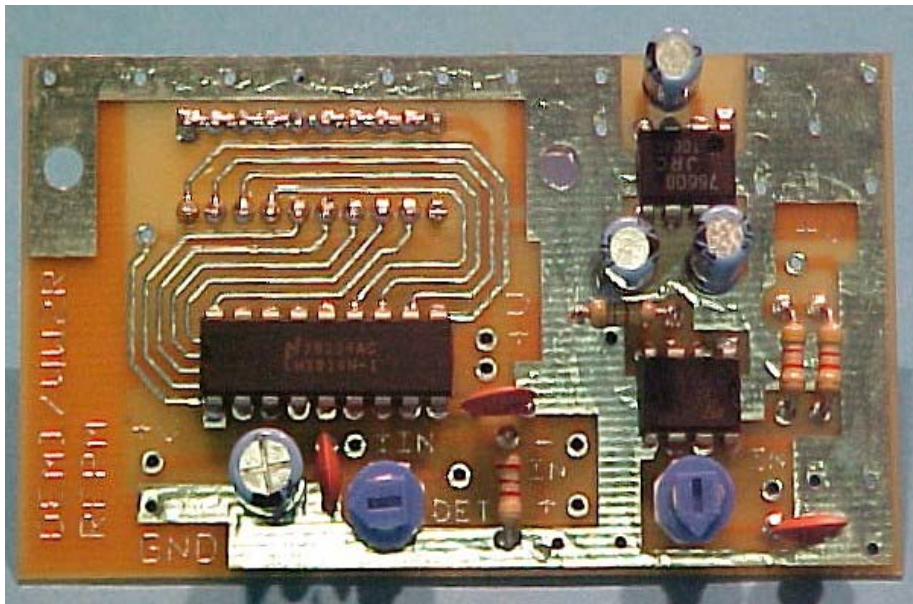
DEM RFPMK

Positive or Negative Current Driven LED Power Meter

Do you have a power meter with a broken analog meter? Are your expensive RF power meters "Too Good" to take on a portable operation? Do you wish you just had some economic way of RF power indication for every band you operate on? This 10-segment bar graph display may be utilized with any type or quality of RF detector or sensor circuit.

CIRCUIT DESCRIPTION:

The DEM RFPMK designed by WW2R and Down East Microwave Inc. is a spin-off Dave's original design that has appeared in many recent periodicals and on his web site. The idea we had at DEMI was that most RF diode detectors have a negative current output. His original design only accommodates positive current inputs. With this design, the circuit will operate with either a positive or a negative current input. The RFPM can be operated from a standard 9 volt battery and/or DC supply with the range of 8 to 17 VDC.

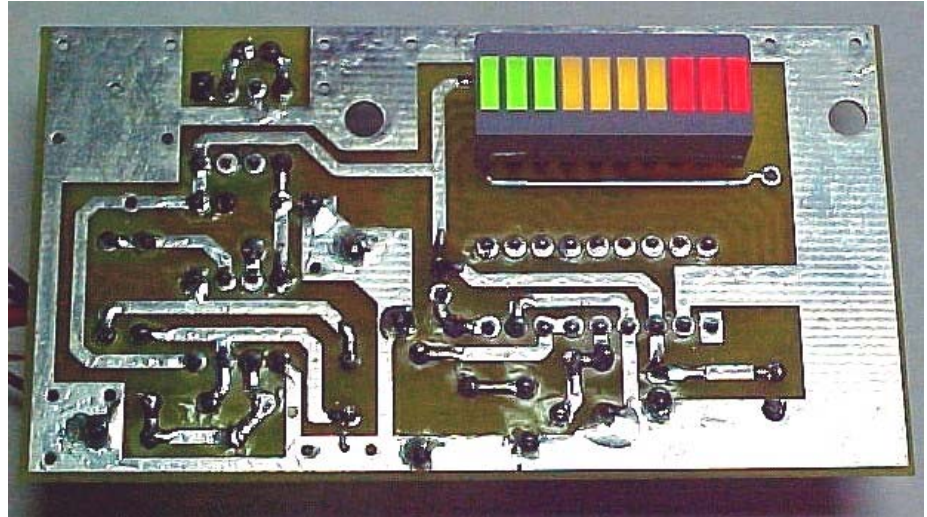


The heart of the circuit is a 10 segment bar graph display controlled by a LM3914 driver integrated circuit.. The LM3914 accepts a positive current input and drives the 10-segment bar graph in ascending steps. There is an option of lighting a single LED instead of the complete bar graph if you wish to conserve battery power during a portable operation. To

accommodate a negative current input, the circuit contains a isolated power supply to bias a Dual Op-Amp. With the proper configuration, you can tailor the meter for your specific use. It is also easily changed or could be configured with a switch to make it truly universal accepting all possibilities. After calibration, simply plug in or switch to the sensor or detector of choice, and have repeatable RF power measurement or verification.

This circuit is the perfect compliment for any microwave power amplifier with a relative RF power, voltage/current output circuit. It also can be implemented with any directional power detector found in the surplus market.

One other feature of the circuit is that the Bar Graph LED display is mounted on the back of the PCB. This allows the user to mount the PCB permanently to a housing or panel for clear vision and still have the ability to configure, align, and test the circuit before use. The RFPM is available as a circuit board kit.



DEM RFPM SCHEMATIC

