

Parabolic Microphone

Created "Sept 17 2004"

Updated "Oct 5 2004"

Using these circuits will give a reasonably Good system. A Better System can be obtained for Much more Money. So it depends on what you want. I use Individual Circuits for the Spkr to Mic, Preamp, power amp and filter.
This allows for easy changing, if you are not happy with any one of them.

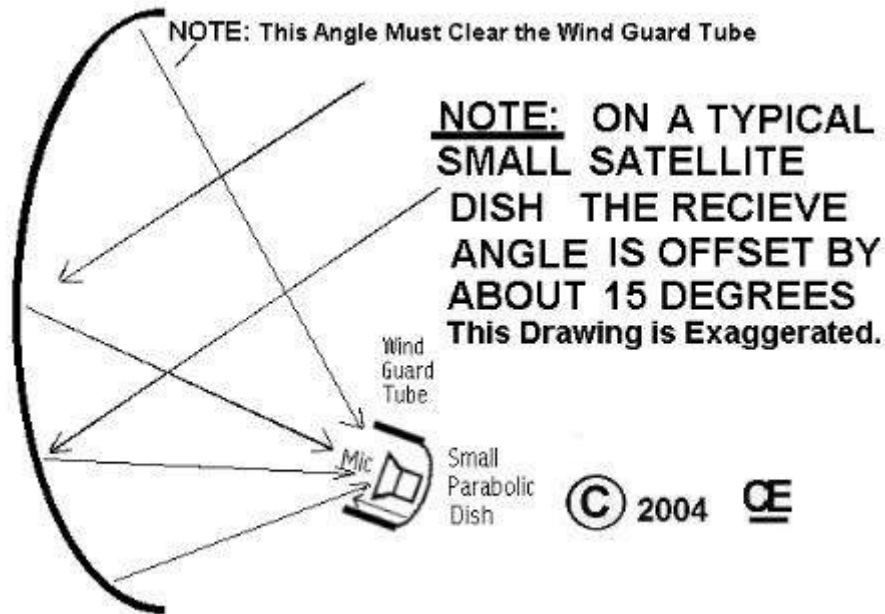
Weither you want a Parabolic Dish or a Shotgun Type of Mic, the electronics is Basically the same. My Experience with Shotgun Mic's is not that good. I prefer the Parabolic.

Parabolics should be at least 18 inches in diameter for this purpose. Smaller diameters don't work very well. However "This Preamp is Quite Suited to Dynamic or Electric Microphones". Any Type of Microphone can be used, But I prefer using a speaker as a Microphone. It has more surface area and typically a reasonable frequency response for this particular application.

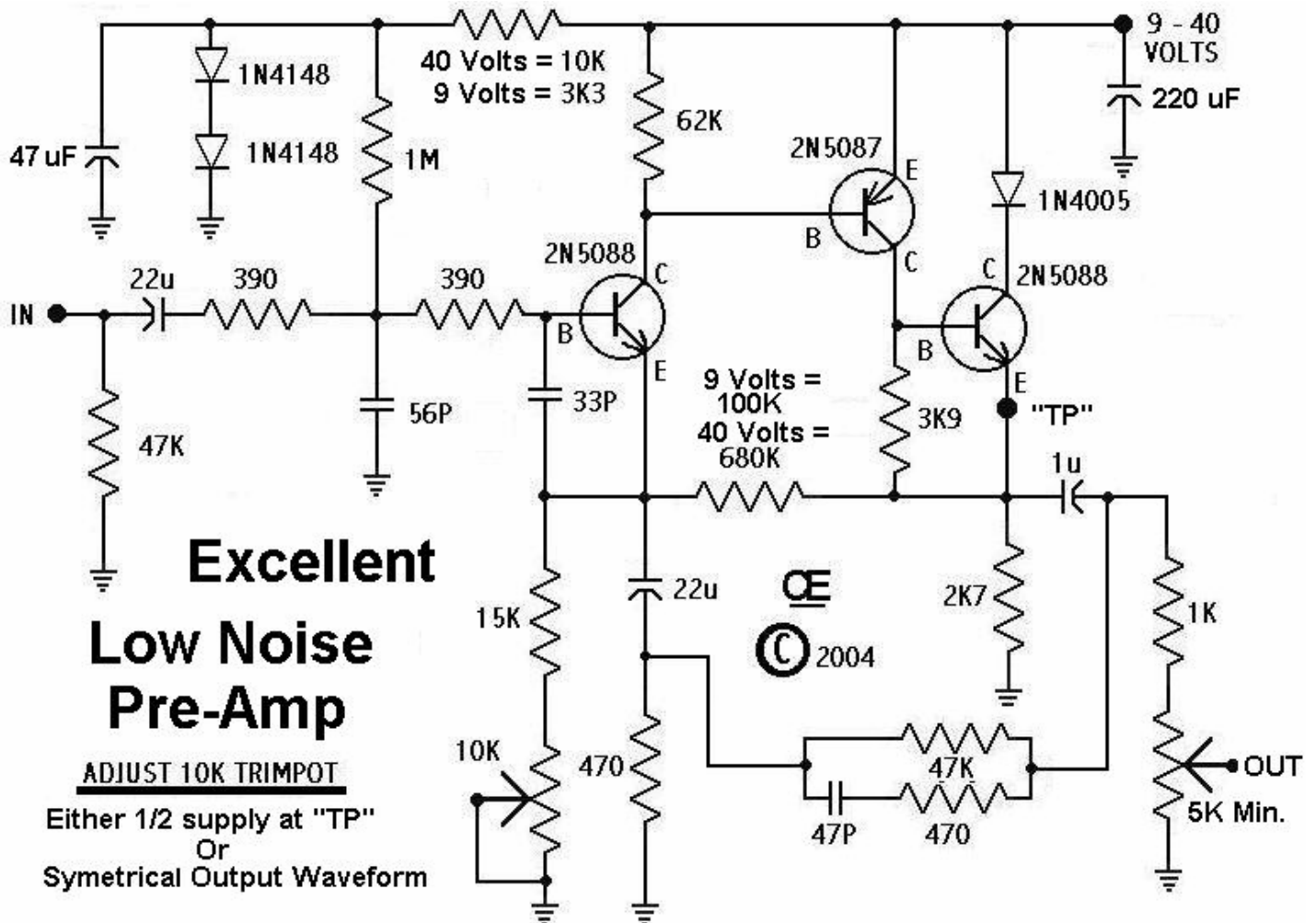
For a better setup, Use a Large parabolic as your main dish and a Small parabolic behind the Mic. This Smaller parabolic catches any signals that are missed and reflects them back into the main dish. Additionally, put the mic in a tube so that Wind coming in from the sides does not hit the microphone.



A Typical Small Satellite Dish.



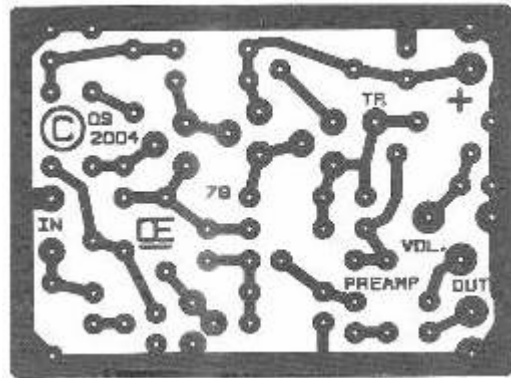
IMPORTANT NOTE: See the Recieve Angle. Although these dishes are readily available, This Angle can be a nuisance in Aiming correctly.



Frequency Response is Flat from 20 to 20,000 Hz +/- 3 db

This Preamp has a 10 Second Stabilization time, due to the diode bias circuit.

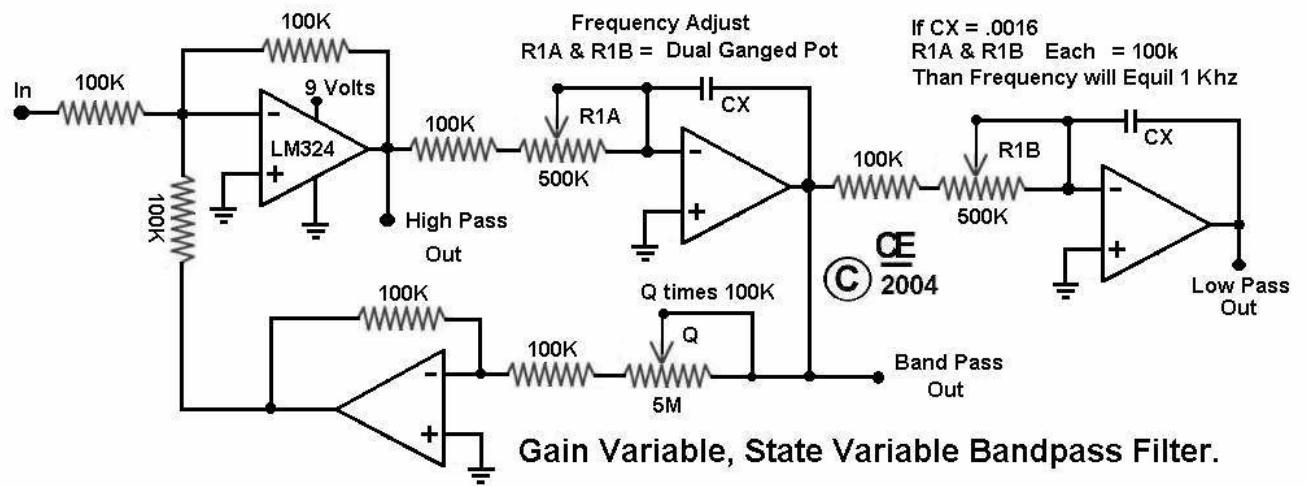
Preamp Schematic



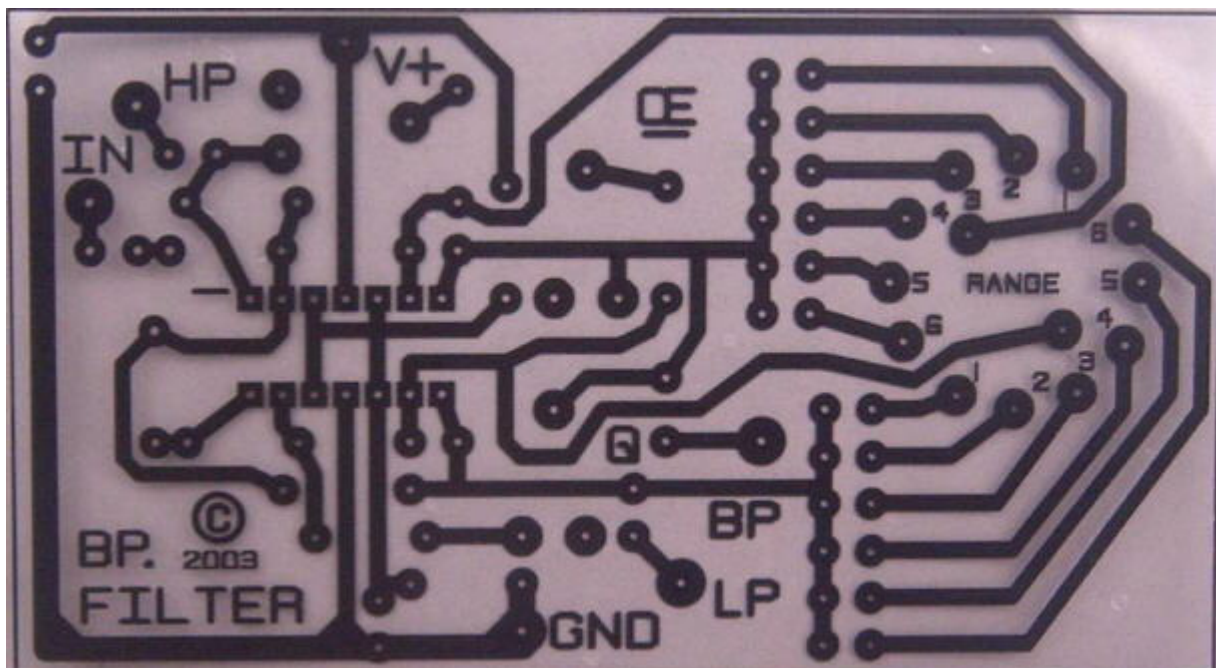
Preamp PCB



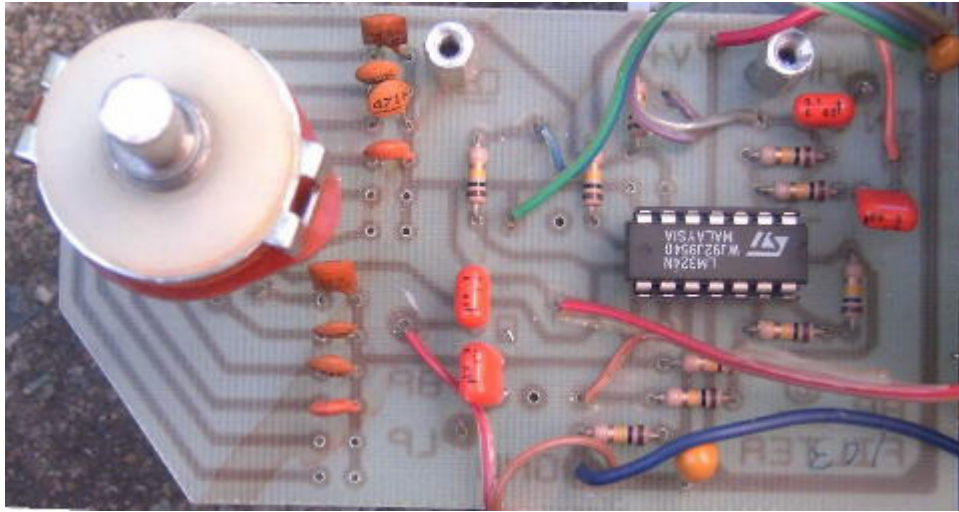
Preamp Picture Overlay



Parametric Filter Schematic

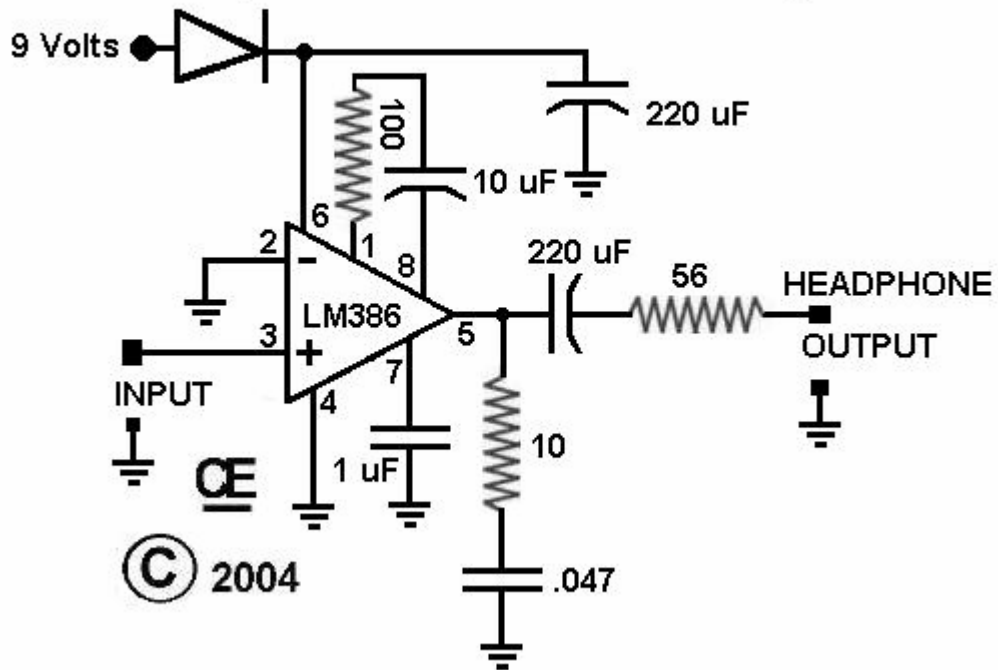


Parametric Filter PCB

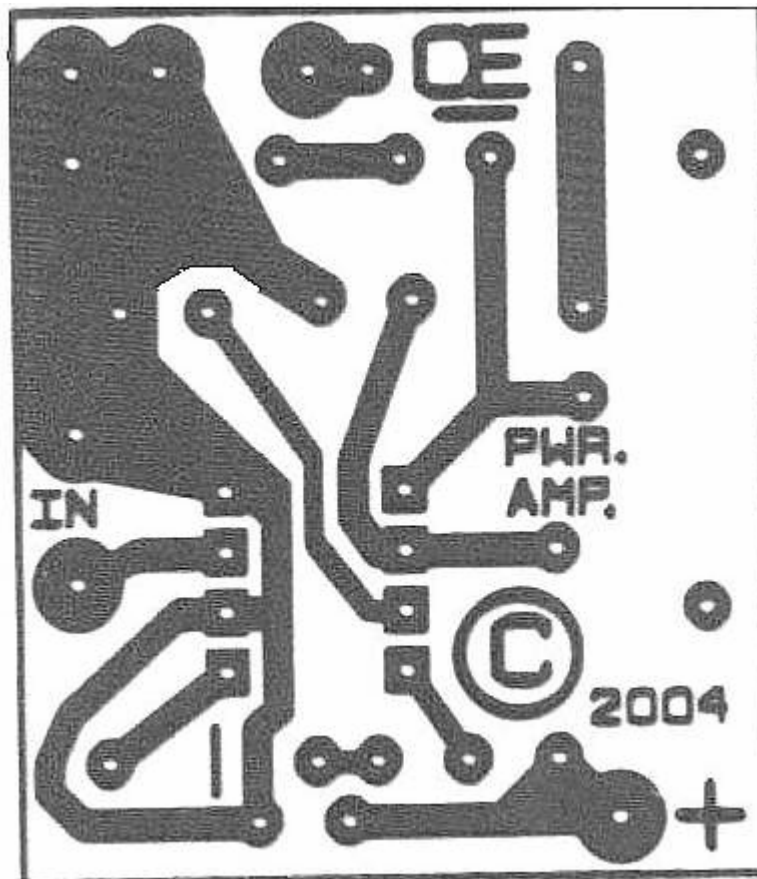


Parametric Filter Picture Overlay

Headphone Power Amp



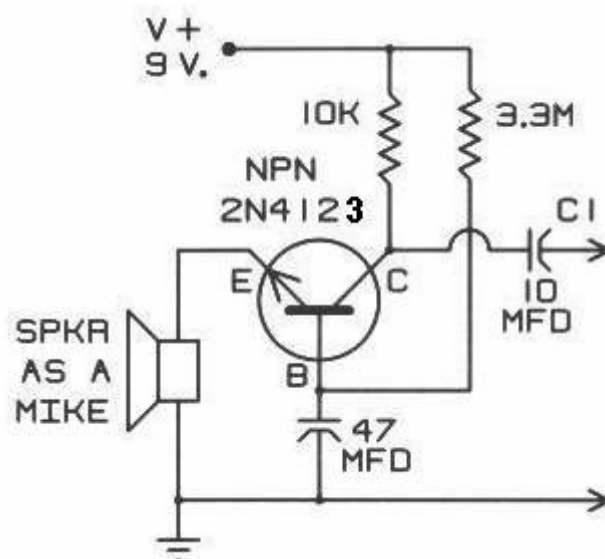
Power Amp Schematic



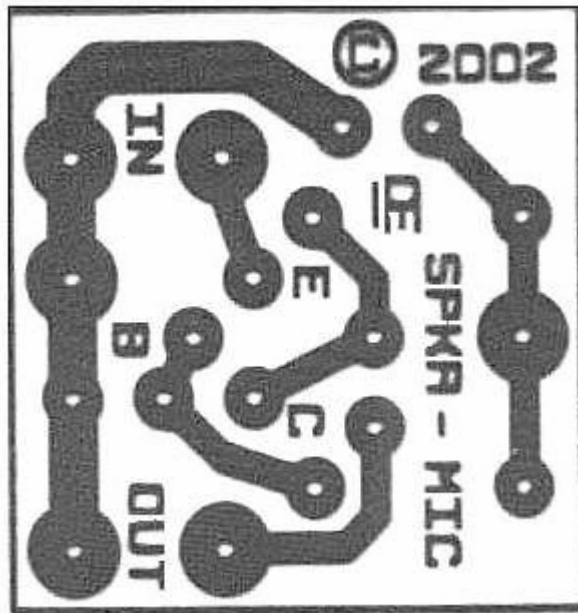
Power Amp PCB



Power Amp Picture Overlay



Speaker as a Mic Schematic



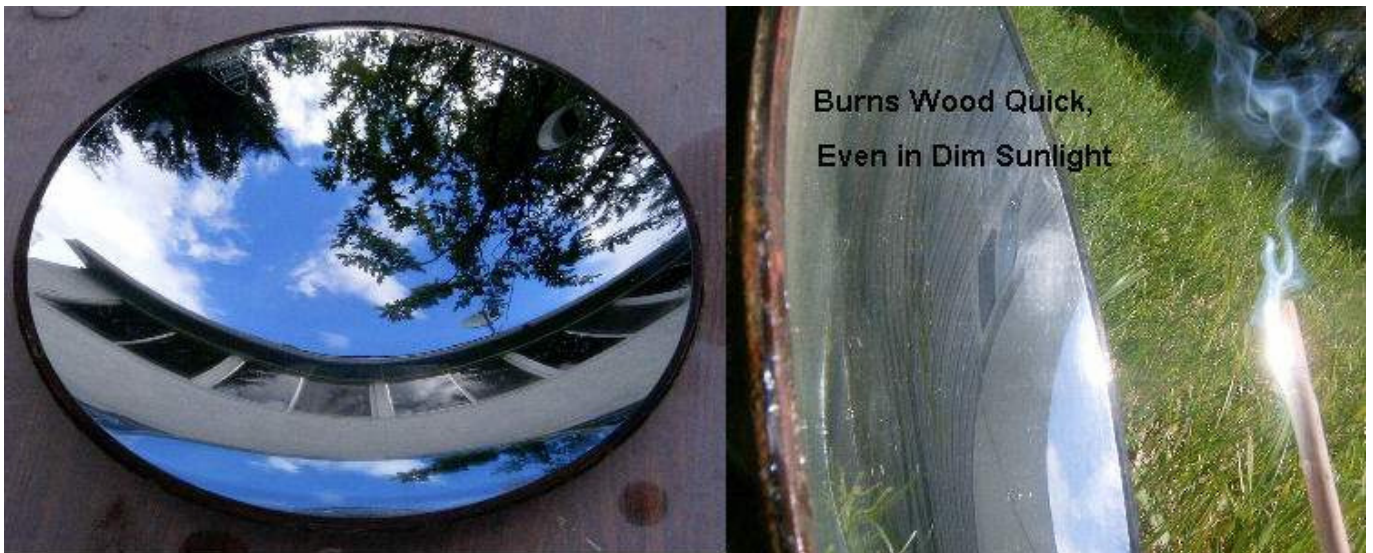
Speaker as a Mic PCB



Speaker as a Mic Picture Overlay



A 5 Foot Satellite Dish. This one is a 90 degree Focus Angle



A 32 Inch Satellite Dish. This one is about a 75 degree Focus Angle. A Signaling Mirror From A WW2 Destroyer. Viewing Distance greater than 2 miles. Made by "Bausch & Lomb" Excellent Optical Qualities.