

GBPPR 'Zine



Issue #99 / The Monthly Journal of the American Hacker / July 2012

"Births in the United States in 1961 are classified for vital statistics into White, Negro, American Indian, Chinese, Japanese, Aleut, Eskimo, Hawaiian and Part-Hawaiian (combined), and 'other nonwhite.'"

--- Excerpt from page 231 of the official "Vital Statistics of the United States – 1961" manual by the U.S. Department of Health, Education, and Welfare.

Blacks born in the United States in 1961 had their race listed as "Negro." You'll want to note that every "birth certificate" Obama has released lists his race as "African," which is much more recent term!

(www.nber.org/vital-statistics/historical/nat61_1.CV.pdf)

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Martin Kaiser 1059 Preamplifier

Introduction

This is a homebrew version of the most popular audio amplifier ever designed for Technical Surveillance Countermeasures (TSCM) work.

The Kaiser 1059 Preamplifier was originally designed in January 1967 by Marty Kaiser of Martin L. Kaiser, Inc. for use by the U.S. Army Intelligence Materiel Support Office (USAIMSO). Over the years, Kaiser would go on to sell over 10,000 of these units to all sorts of domestic and foreign intelligence and military agencies.

Unfortunately, his sales to the FBI would lead to his ultimate downfall... You see, the FBI (and most other intelligence agencies) create "front companies" in order to do business with so the purchases can remain anonymous. At that time, the FBI was using "U.S. Recording Company" as one of their cut-outs. One day, while at the FBI headquarters, Marty Kaiser noticed that the U.S. Recording Company was marking up the prices of his equipment 30% on their invoices to the FBI. For example, Kaiser would sell a body transmitter to U.S. Recording Company for \$150, then U.S. Recording Company would turn around and bill the FBI \$195! This little scam would come to a quick halt when Marty Kaiser mentioned it during his testimony before the House Select Committee on Intelligence in 1975. The U.S. Recording Company scandal would continue to grow—and-grow, much to the embarrassment of the FBI. It turned out, of course, the people from U.S. Recording Company and the FBI were buddies and didn't like Marty Kaiser raining on their little parade.

Over the course of the next 30+ years, the FBI would engage in a series of ridiculous lawsuits, false accusations, and illegal harassment against Marty Kaiser. The FBI would essentially "blackball" Kaiser from selling his equipment to the U.S. government. His sales would fall sharply and a frivolous lawsuit filed by two FBI agents against him would nearly bankrupt his family. Oh, don't ever shop at Lowe's hardware stores again!

This whole story is covered in much more detail in Marty Kaiser's book *Odyssey of an Eavesdropper: My Life in Electronic Countermeasures and My Battle Against the FBI*. If that story sounds like it would make a good movie – you'd be correct! The Will Smith/Gene Hackman movie *Enemy of the State* is loosely based on the life of Marty Kaiser, who was a consultant on the set.

Overview

The Kaiser 1059 Preamplifier itself consists of several 2N3391A and 2N3393 transistors configured for various gains and input/output impedances. Total system gain is over 100 dB with fairly low noise. There is a **Tone On** option to provide a 500 Hz tone generator on the outputs and a **Volts On** option to provide a +9 VDC bias (through 4.7k ohms) on the **J4** input for biasing external accessories or a carbon/electret microphone. There is also a switchable 1,600 Hz low-pass filter to clean up the signal before it reaches the outputs.

There are four separate inputs, each with impedances from 1k to 500k ohms. This allows connecting the 1059 to all sorts of different devices without loading them down. Gain of the overall device is control by selecting which input to use. The **J1** input should be used for "unknown" signals, as it has a high-voltage DC blocking capacitor and a gain adjustment potentiometer.

The 1059 provides two outputs, one is designed to drive a 2,000 ohm Telex headset (HFY-91 or equivalent) and the other is basically a "line level" output. Using standard low-impedance (8/16/32 ohm) headphones with the 1059 is not recommended.

Martin L. Kaiser 1059 Preamplifier Operating Manual

The 1059 is a multiple input/output low noise amplifier that provides a near-perfect match to just about any microphone or recorder. The 1059 includes a tone generator for testing amplifier performance and unknown lines, switchable excitation voltage for external accessories and a low pass/high pass filter selector.

The input jacks, **J1** through **J4**, have input impedances ranging from 2 megaohms to 1,000 ohms. Maximum amplification is available through **J2** and **J3** and medium amplification through **J4**. **J1** and its associated **J1 Gain** control has adjustable amplification. With the **J1 Gain** control advanced fully clockwise the output level of a signal fed into **J1** will be roughly one-half that of the same signal fed into **J2**.

J1 can sustain approximately 1,000 volts DC. Use this jack when it is unknown how much voltage or type of signal is on a line pair. To operate the 1059, insert the special 2,000 ohm headset supplied into output jack **J6**. The headset is worn with the gray tube under the chin with the sound output holes facing slightly (30 degrees) forward. The 1059 is NOT designed to drive low-impedance headphones. Turn **J1 Gain** fully counterclockwise (minimum) and advance the **Volume** control clockwise (turning on the amplifier) roughly one-third turn. Advance the **J1 Gain** control slowly clockwise until either a signal is recovered or the control reaches full clockwise. If, while advancing **J1 Gain**, a loud hum is heard, it probably indicates the line is carrying high-voltage AC. USE CAUTION! Do not apply high level AC signals to any other input.

J2 (500k ohms) is a high impedance input that provides the maximum amplification of the 1059. Utilize this jack when the DC and AC level and relative signal strength on a line pair is known. **J2** may also be used with external accessories such as the 1040-2 Contact Microphone and 1040-4 Hot-Pack.

J3 is used when the line impedance or accessory is near 10k ohms. Utilized this jack with accessories such as the 2030 Carrier-Current Probe or when analyzing telephone systems.

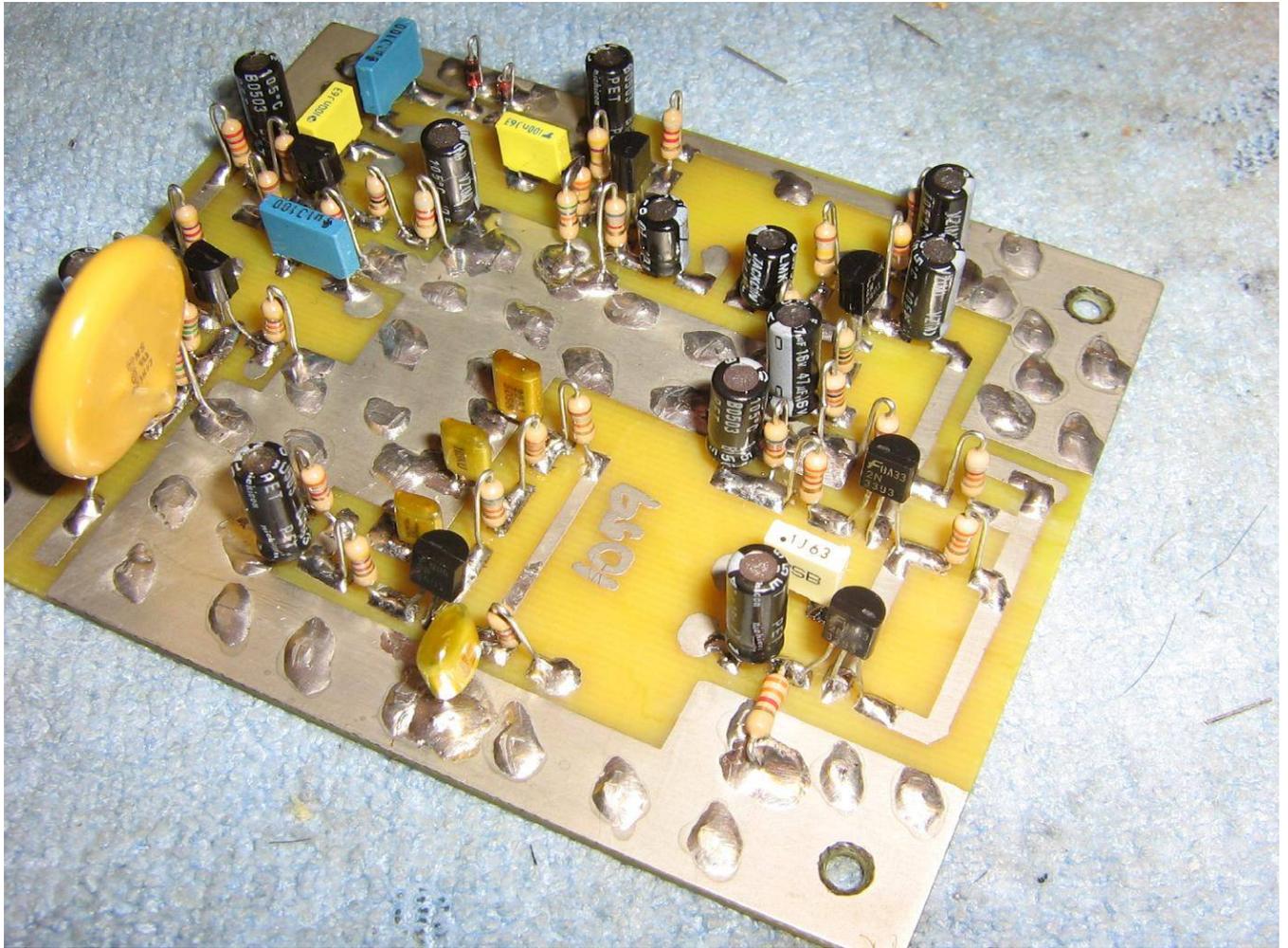
J4 provides lower amplification and impedance (1,000 ohms) than **J2** or **J3**. Use this jack when the input signal is too high in level for the other inputs. This jack also can supply an excitation voltage (9 volts through 4,700 ohms) for external accessories or carbon microphones. Voltage is applied to the jack when the **J4 Volts On** (red) switch is in the UP position.

The **Tone - On** (blue) switch powers an internal tone generator. The output of the generator is fed through the last three stages of the amplifier and applied to output jacks **J5** and **J6**.

The **Filter - In** (yellow) switch selects the amplifier roll-off characteristics. Use this switch when excessive hum is encountered or a more "crisp" signal is desired.

A convenient check of the battery can be made by inserting the mini plug-clip lead cable (supplied) into **J4**, turning ON the 1059 power and placing the **J4 Volts On** switch in the UP position. Connect the clips to a voltmeter set on the 9 or 12 volt range. Replace the battery when the reading is below 7.5 volts. To change the battery, loosen the two cover screws one or two turns, slip off the cover and remove the old battery. Install a fresh alkaline battery, replace the cover being careful not to pinch the battery leads and tighten screws (don't over-tighten!).

Pictures & Construction Notes



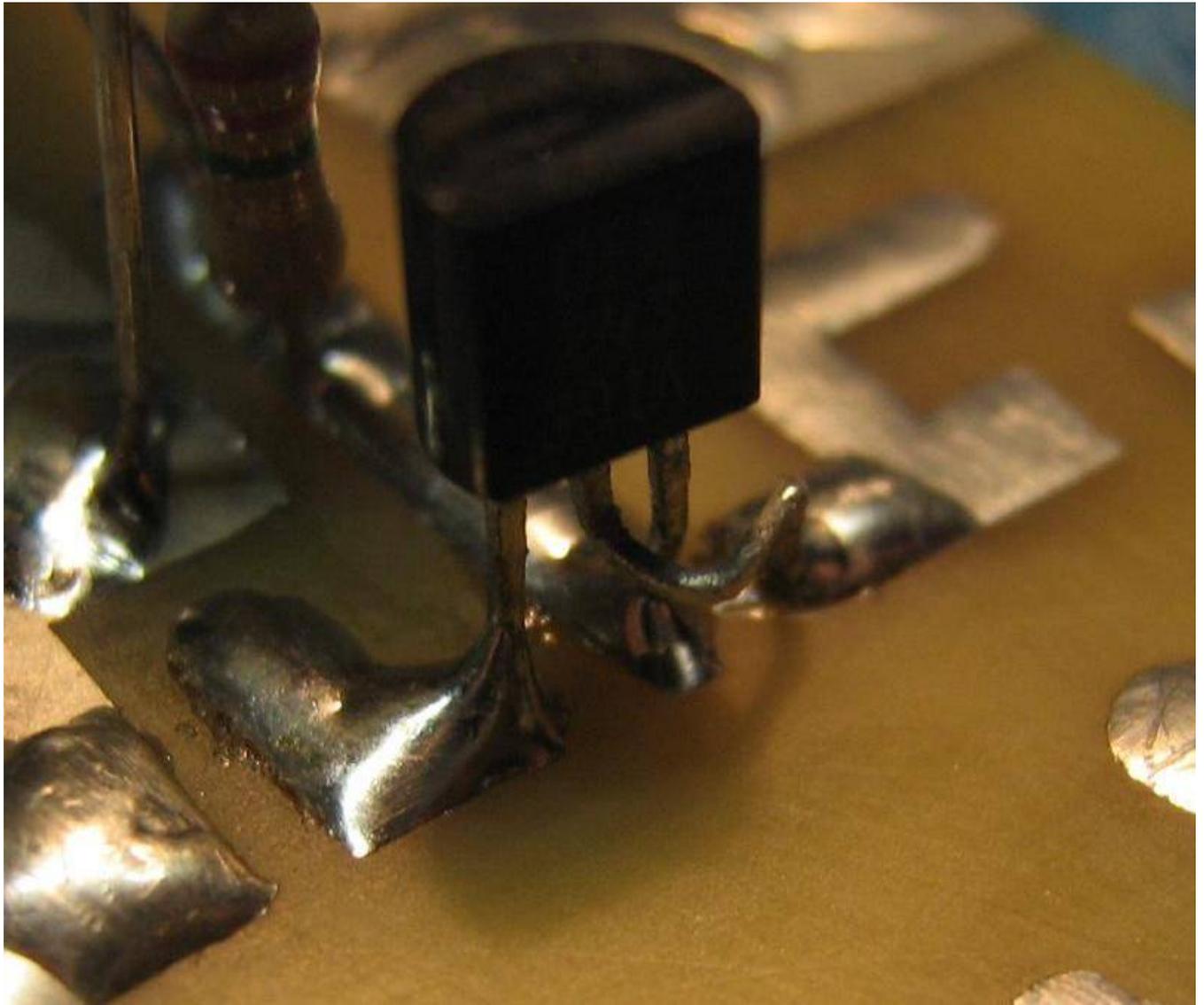
Overview of the homebrew Martin Kaiser 1059 Preamplifier circuit board.

The circuit was made using standard 1/4-watt, 5% tolerance carbom-film resistors to match the performance of the stock 1059.

The big yellow disks are high-voltage (1000V) 0.022 μ F capacitors. These are required if you ever connect to an unknown line and it may contain a large bias voltage. Only the **J1** and **J2** input jacks are capable of handling a high voltage!

Due to the circuit's high gain, it will *require* using a proper PC board. Preferably a PC board with a large ground plane.

The low frequency response of the 1059 goes down to around 3 Hz. There is really no high frequency roll-off in the circuit's design, so the 1059 will operate well into the low VHF range. This may required additional circuit shielding or ferrite beads on power leads, in certain applications.



The 2N3319A and 2N3393 transistors are in a "Emitter Collector Base" configuration, which is different from the normal "Emitter Base Collector" used in common 2N3904 or 2N2222s.

Keep this in mind if you make the PC board before reading the datasheets – like I did!



Mounting the circuit board in an old video switch box.

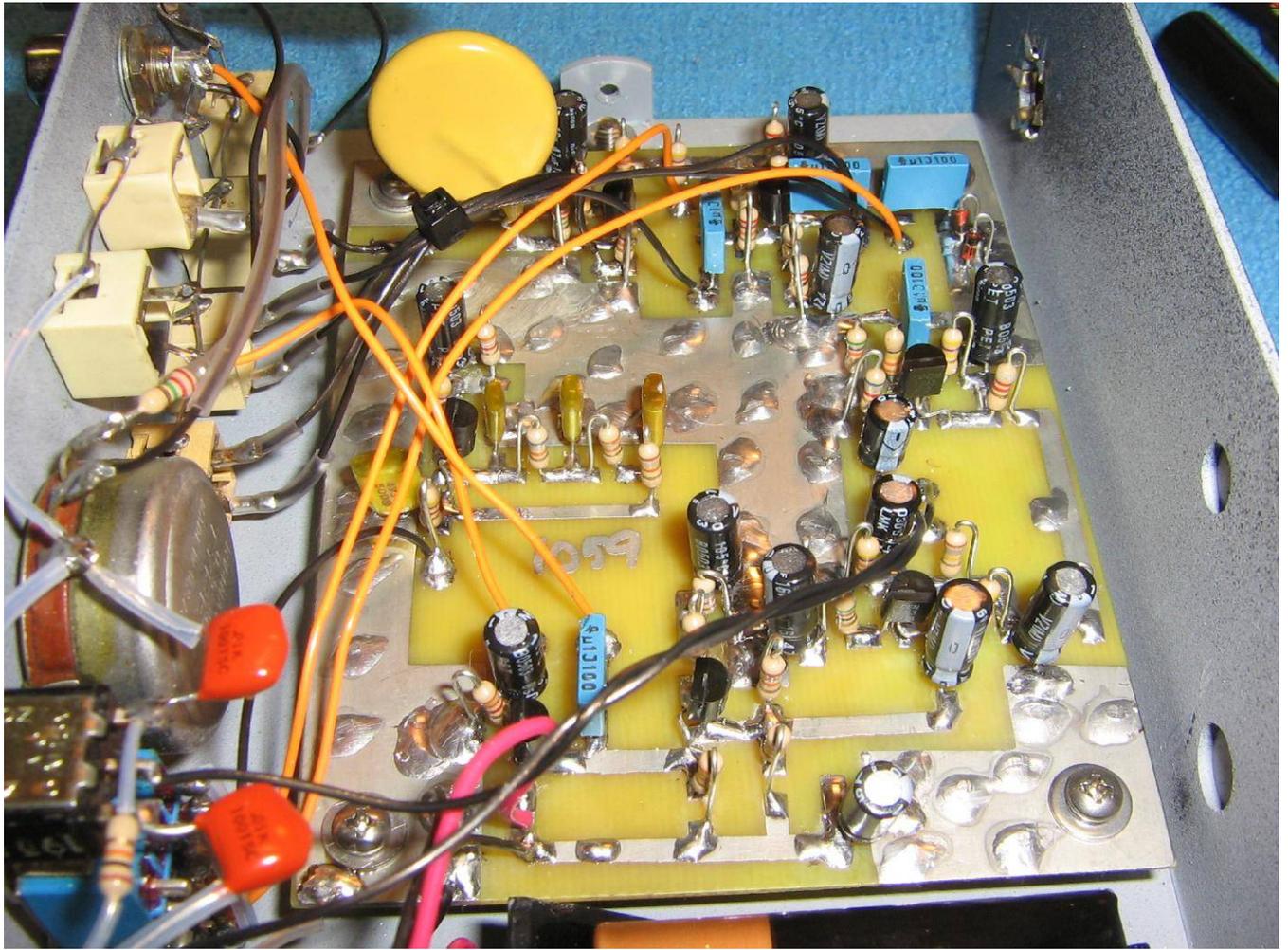
The only changes from the stock 1059 are the addition of a power-indicating LED, an extra RCA jack for the **J5** output, and an extra BNC jack for the **J1** input.

The 10k ohm **Volume** potentiometer also has a built in power switch.

The input/output jacks are standard panel-mount 1/8-inch switched jacks.

The circuit may look a little confusing at first, but just follow the schematic for each of the transistor "sections" in order to understand its full operation.

You can then break the circuit down into smaller parts which will aid in the understanding of their operation.



Alternate view.

Try to keep all the wiring as short as possible to prevent the circuit from oscillating.



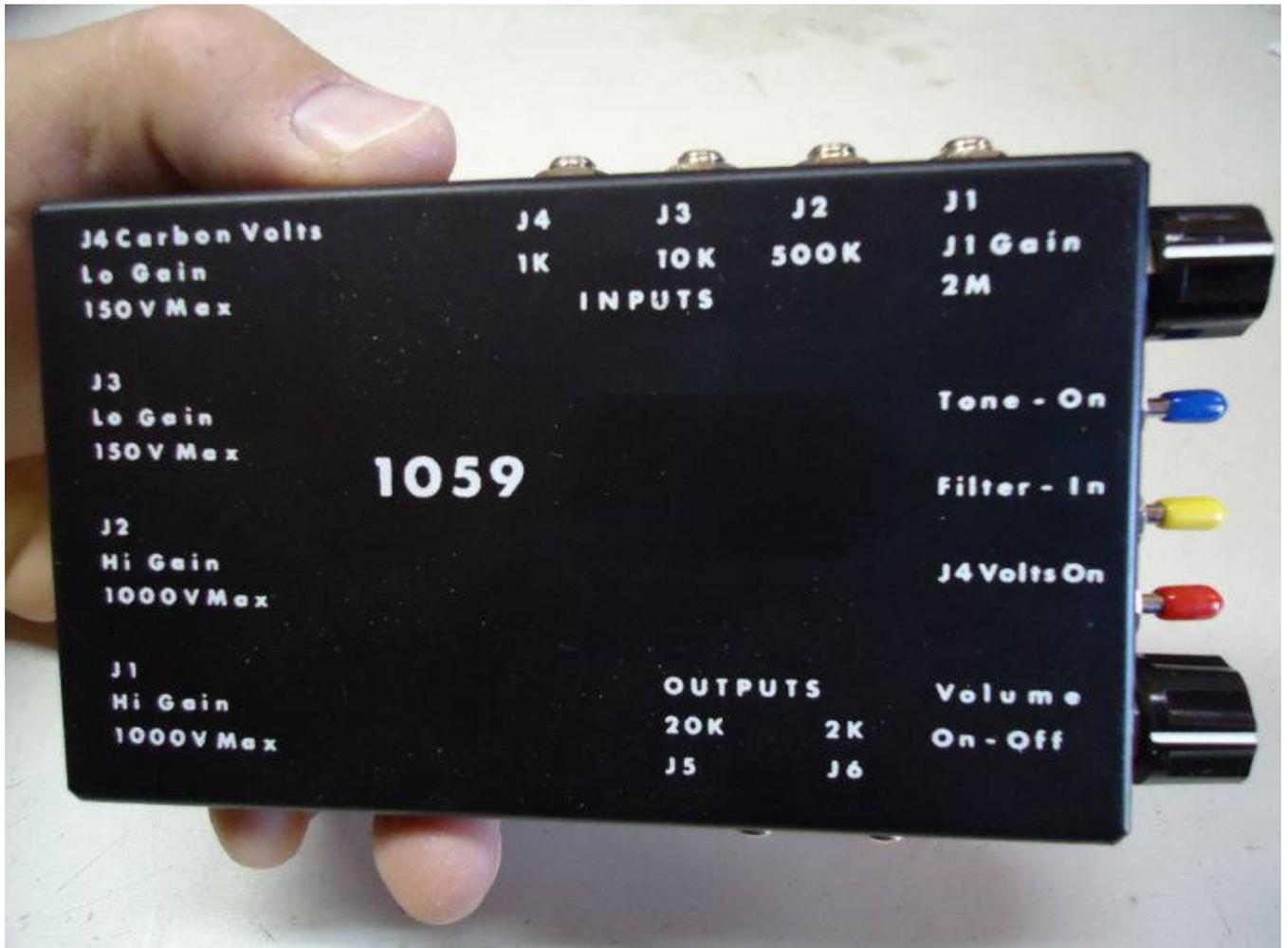
Outside case overview of the homemade Martin Kaiser 1059 Preamplifier.

The input 1/8-inch jacks are along the bottom. The output 1/8-inch jacks are along the top.

The BNC jack on the left is in parallel with the **J1** input. Using a BNC jack allows the use of various adapters to connect to the inputs.

A RCA jack is in parallel with the **J5** output. This is a "line level" output which can then be connected to other pieces of test equipment.

The switches flip to the right to enable their function.

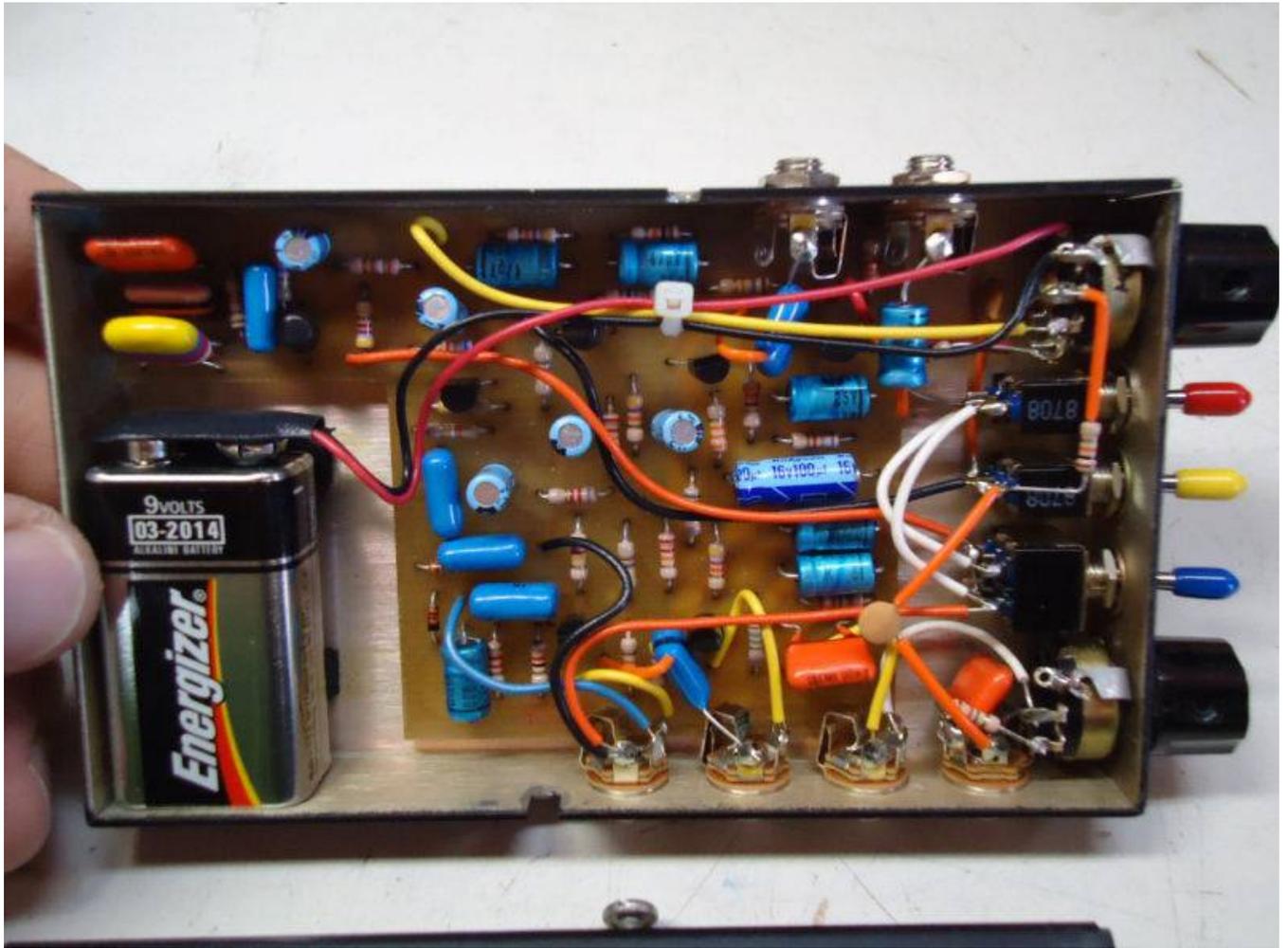


Overview of a real Martin Kaiser 1059 Preamp.

Outside case overview showing the labeling.

The four inputs are along the top.

The two outputs are along the bottom.



Internal overview of a real Martin Kaiser 1059 Preamp.



Overview of a Dektor Counterintelligence and Security Micro-Amp.

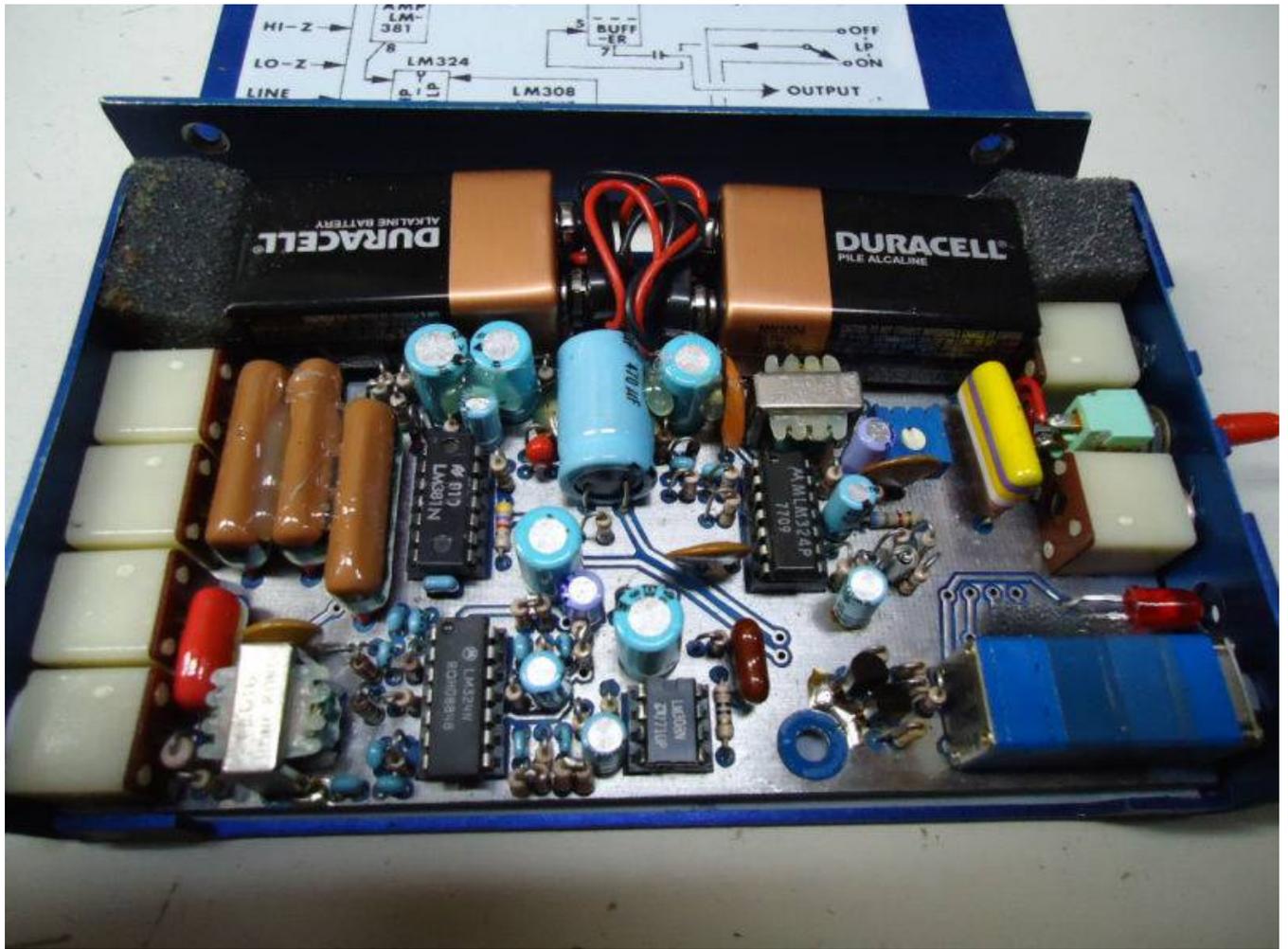
Look familiar? LOL!

Allan Bell was a former Lieutenant Colonel in the U.S. Army's intelligence school and he worked alongside Marty Kaiser.

Bell formed Dektor Counterintelligence and Security, Inc. after retiring from the Army.

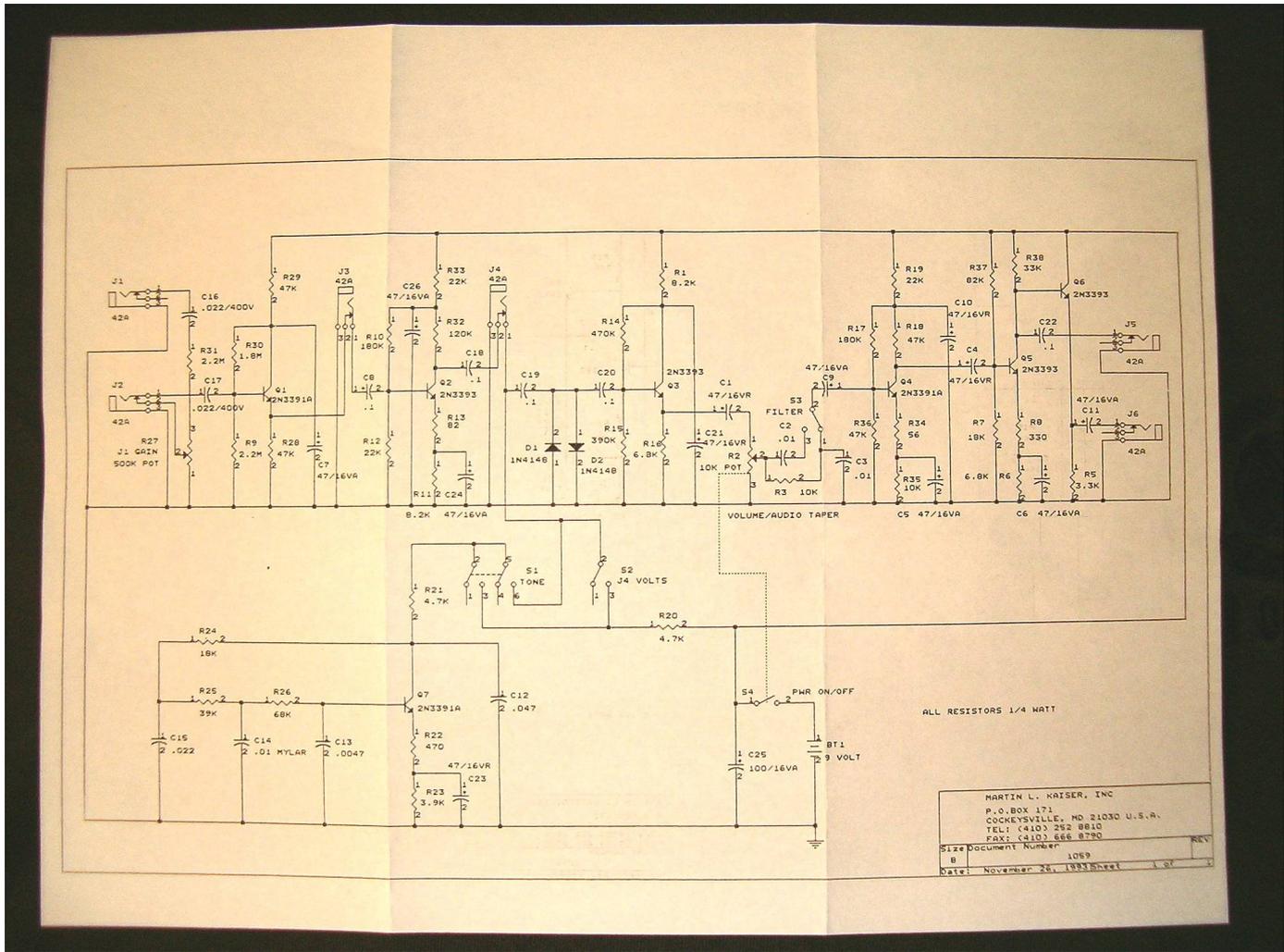
He sold mostly products which were knock-offs of Marty Kaiser's original TSCM equipment.

Today, Dektor is known for selling Psychological Stress Evaluators (PSE) and peddling in the pseudoscience of lie detection.



Internal overview of a Dektor Counterintelligence and Security Micro-Amp.

Martin L. Kaiser 1059 Preamp Schematic



Martin Kaiser 1059IR Infrared Detection Probe

Overview

This is a homebrew version of the Martin Kaiser 1059IR Infrared Detection Probe.

This probe is a handy accessory for the Martin Kaiser 1059 Preamplifier in order to detect transmitters or alarm systems which may contain an active infrared emitter.

The homebrew probe is just a piece of 3/4-inch diameter copper pipe with two matching end caps. A LED holder is used to house an Optek OP599A phototransistor (Mouser Part #: 828-OP599A) which is then attached to one of the end caps. The other end cap contains a standard 1/8-inch jack for connection to the 1059. That's it!

Martin L. Kaiser 1059IR Infrared Detection Probe Operating Manual



The 1059IR is powered by either **J4** or **J3** of the 1059. The unit contains a Wratten IR filter that blocks virtually all visible light.

Insert the plug into jack **J4** on the amplifier. Place the **J4 Volts On** (red) switch in the UP position to supply power to the probe. Insert the 2,000 ohm headset into **J6** and adjust the 1059 for normal operation.

At a distance of 3 feet the probe "sees" an area roughly 1 foot in diameter. Any fluorescent lamp (since they emit much more IR than an incandescent bulb) in the area should be turned off by removing the bulbs. Point the probe in the desired direction and slowly scan the area with one foot overlapping sweeps. Pay particular attention to the level of background noise heard through the headset. If the ambient light level in the search area is too high or an IR transmitter operating at frequencies above the normal hearing range is detected, the amplifier will fall silent. If possible, lower the ambient light level or shade the search area. Make sure that a slight background noise is always heard. The unit may be tested with a TV remote control. Point both the control and 1059IR at any shiny object to hear the controller signal.

If, for reasons decided by the user, more amplification is needed remove the bottom cover of the 1059. Note that an orange wire connects **J4** to the **Tone - On** (blue) switch. Disconnect this wire at the **J4** end and connect it to the same jack terminal on **J3**. This will make the **J4 Volts On** switch a **J3 Volts On** switch. Bear in mind that this increase gain may cause the 1059 to saturate more easily.

Again... Always pay attention to the background noise to determine if the system is saturated.

Pictures & Construction Notes



Parts overview.

The Optek OP599A phototransistor was used because of the fact that it contains an internal infrared bandpass filter molded into the lens of the phototransistor. This filter highly rejects the phototransistor's response below the 700 nanometer (visible) wavelength.

It's also possible to use a normal Radio Shack 276-145 phototransistor (or an equivalent) if you need a wider frequency response.

For a little bit of extra gain, it's possible to arrange the Optek OP599A phototransistor in a Darlington configuration, but you may find that the lower gain is more helpful, as this prevents the overall circuit from saturating.



Cut a piece of 3/4-inch diameter copper pipe about four inches long. This will act as a handle. You may prefer to make it a little longer (or smaller).

Drill a hole in one of the 3/4-inch copper pipe end caps to fit the LED holder.

Drill a hole in the other 3/4-inch copper pipe end cap to fit the 1/8-inch jack.

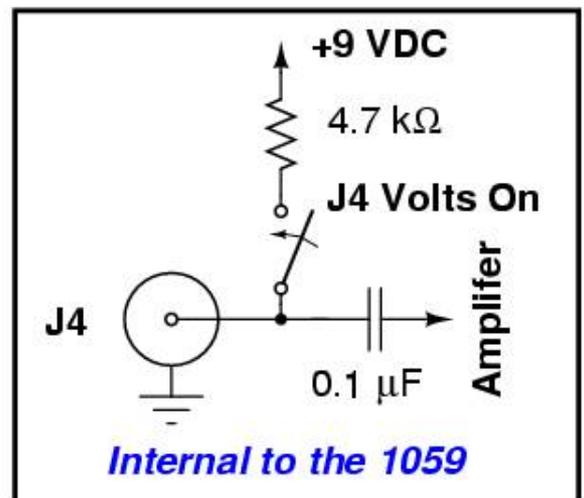
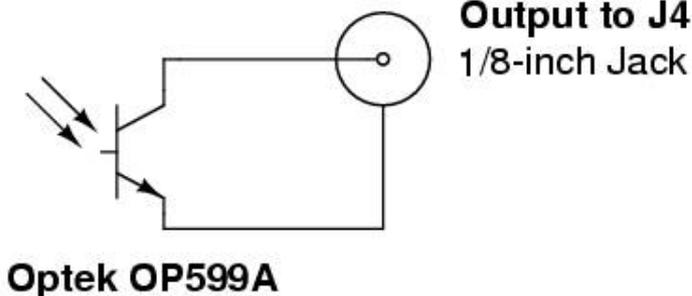
Mount the Optek OP599A phototransistor in the LED holder.

The "flat" side of the Optek OP599A is the collector. This should go to the "tip" of the 1/8-inch jack. The emitter of the Optek OP599A should go to the "sleeve" of the 1/8-inch jack.

Secure the end caps to the copper pipe handle using JACO Just-For-Copper solderless copper bonding adhesive.

Martin Kaiser 1059IR Infrared Detection Probe

Homebrew Version





Completed 1059IR Infrared Detection Probe.

The copper was spray painted flat black and a piece of sticky-backed felt was wrapped around the handle section.

Two large O-rings were also added around the handle to act as shock absorbers and to prevent any scratching.

Use the infrared detection probe and the matching 1059 amplifier by "listening" to the level of the background noise.

There should be constant static if no infrared signal is being detected.

When a strong infrared signal is detected, the noise will suddenly go "full quieting." You can test this method by pointing the probe at an incandescent light operating at 120 VAC.

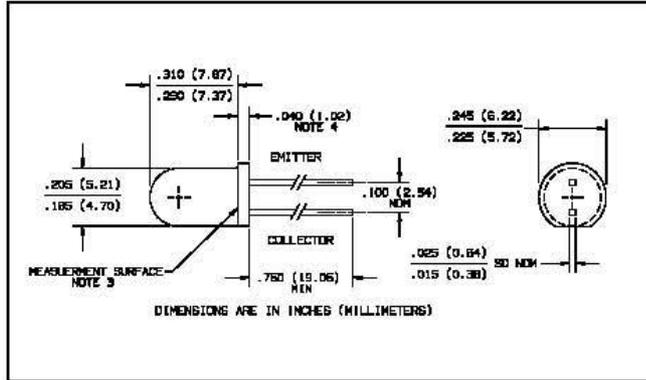
Lights in the distance will have a 60/50 Hz hum, while a strong light nearby will appear to be "quiet." This is because the phototransistor is saturated by the strong light.

When the phototransistor isn't saturated by too strong of a signal, you'll be able hear any carrier modulation(s), if they happen to fall within the normal hearing frequency range. Use an oscilloscope on the **J5** output to view any out-of-band signals.



Product Bulletin OP599
June 1996

NPN Plastic Silicon Phototransistors Type OP599 Series



Features

- Variety of sensitivity ranges
- T-1 3/4 package style

Description

The OP599 series phototransistor consists of an NPN silicon phototransistor mounted in a dark blue plastic injection molded shell package. The narrow receiving angle provides excellent on-axis coupling. The sensors are 100% production tested for close correlation with Optek GaAlAs emitters.

Optek's packaging process provides excellent optical and mechanical axis alignment. The shell also provides excellent optical lens surface, control of chip placement, and consistency of the outside package dimensions.

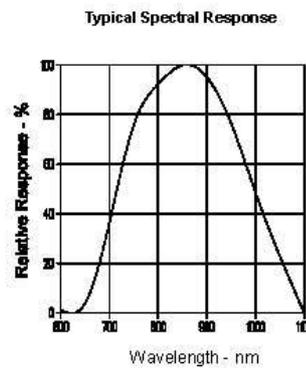
Absolute Maximum Ratings ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5.0 V
Continuous Collector Current	50 mA
Storage and Operating Temperature Range	-40°C to $+100^\circ\text{C}$
Lead Soldering Temperature (1/16 inch [1.6 mm] from case for 5 sec. with soldering iron)	$260^\circ\text{C}^{(1)}$
Power Dissipation	$100\text{ mW}^{(2)}$

Notes

- (1) RMA flux is recommended. Duration can be extended to 10 sec. max. when flow soldering. Max. 20 gram s force may be applied to leads when soldering.
- (2) Derate linearly $1.33\text{ mW}/^\circ\text{C}$ above 25°C .
- (3) $V_{CE} = 5\text{ V}$. Light source is an unfiltered GaAlAs emitting diode operating at peak emission wavelength of 890 nm and $E_{\text{eff}} \approx 0.25\text{ mW}/\text{cm}^2$.
- (4) This dimension is held to within $\pm 0.005''$ on the flange edge and may vary up to $\pm 0.020''$ in the area of the leads.

Typical Performance Curves



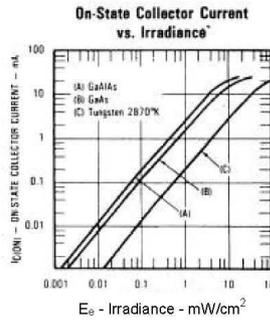
Types OP599

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$I_{C(ON)}$	On-State Collector Current	OP599D	0.20			See Note (3)
		OP599C	0.40		1.95	See Note (3)
		OP599B	1.20		3.85	See Note (3)
		OP599A	2.35			See Note (3)
I_{CEO}	Collector Dark Current			100	nA	$V_{CE} = 10.0\text{ V}, E_e = 0$
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30			V	$I_C = 100\ \mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5.0			V	$I_E = 100\ \mu\text{A}$
$V_{CE(SAT)}$	Collector-Emitter Saturation Voltage			0.40	V	$I_C = 100\ \mu\text{A}$ $E_e = 0.25\text{ mW/cm}^2(3)$

PHOTOSENSORS

Typical Performance Curves



Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.
 Optek Technology, Inc. 1215 W. Crosby Road Carrollton, Texas 75006 (972)323-2200 Fax (972)323-2396

GBPPR Parabolic Microphone

Overview

This project is a fairly high-quality parabolic microphone designed specifically for remote audio intercepts in the standard speech band.

The main parabolic reflector for the microphone is approximately 20.5 inches in diameter (22 inches to the outer-flange) and is made from clear, ultraviolet resistant, shatterproof, polyethylene plastic. It's six inches deep and the focal point is around 4 inches. These parabolic reflectors are sold by the user "sdill471" on eBay for around \$40, depending on their physical condition. He sells reflectors which were "damaged" during the thermoforming process for a little less.

The parabolic reflector dish itself provides around 22 dB of noiseless gain at 1 kHz. As you can probably imagine, the larger the reflector – the higher the gain. Don't even bother using smaller reflectors for audio frequencies...

A standard Radio Shack 270-101 electret microphone will be mounted at the focal point of the parabolic reflector. The electret element itself will be housed inside a salvaged plastic horn tweeter. The horn tweeter will help guide the received audio into the microphone element, even if the focal point mounting is a little off.

The electret microphone will then feed a standard low-noise microphone preamplifier circuit based on the OP37 op-amp. A neat little trick will be used in the OP37's feedback circuit. The gain-setting feedback resistor will be split in two, and two separately tunable resonant tank circuits will be connected between these two feedback resistors.

When tuned to a target frequency between 700 – 3,500 Hz, the resonant tank circuit will "suck" that particular frequency out of the feedback network, and the OP37 will see a very high feedback impedance for that frequency. Since this impedance also sets the op-amp's gain, it will reach near the open-loop gain (80+ dB) for that particular frequency. Using two of these networks allows the boosting of two different frequencies at the same time. This is an easy way to get a lot of gain without adding a lot of noise.

The output from the OP37 will feed a JRC NJM2113 (or Motorola MC34119) low-noise audio power amplifier which is capable of driving standard low-impedance (8/16/32 ohm) headphones or a small speaker. A Xicon/Mouser 42TL004 100 ohm to 8 ohm isolation transformer will isolate the 1/8-inch headphone **Lo-Z Output** jack from the metal case of the project box. One of the op-amps in a LM833 is used as an active split-rail bias for added circuit stability, with the other LM833 op-amp used as a buffer for a **Line Level** output.

A single TL074 quad op-amp makes up the tunable resonant tank circuits. Two panel-mounted 250k ohm potentiometers control the band boost frequency, and another two panel-mounted 1k ohm potentiometers control the band boost level. You'll note the TL074 is configured in a "simulated inductor" configuration to be resonant with a 0.1 μ F capacitor.

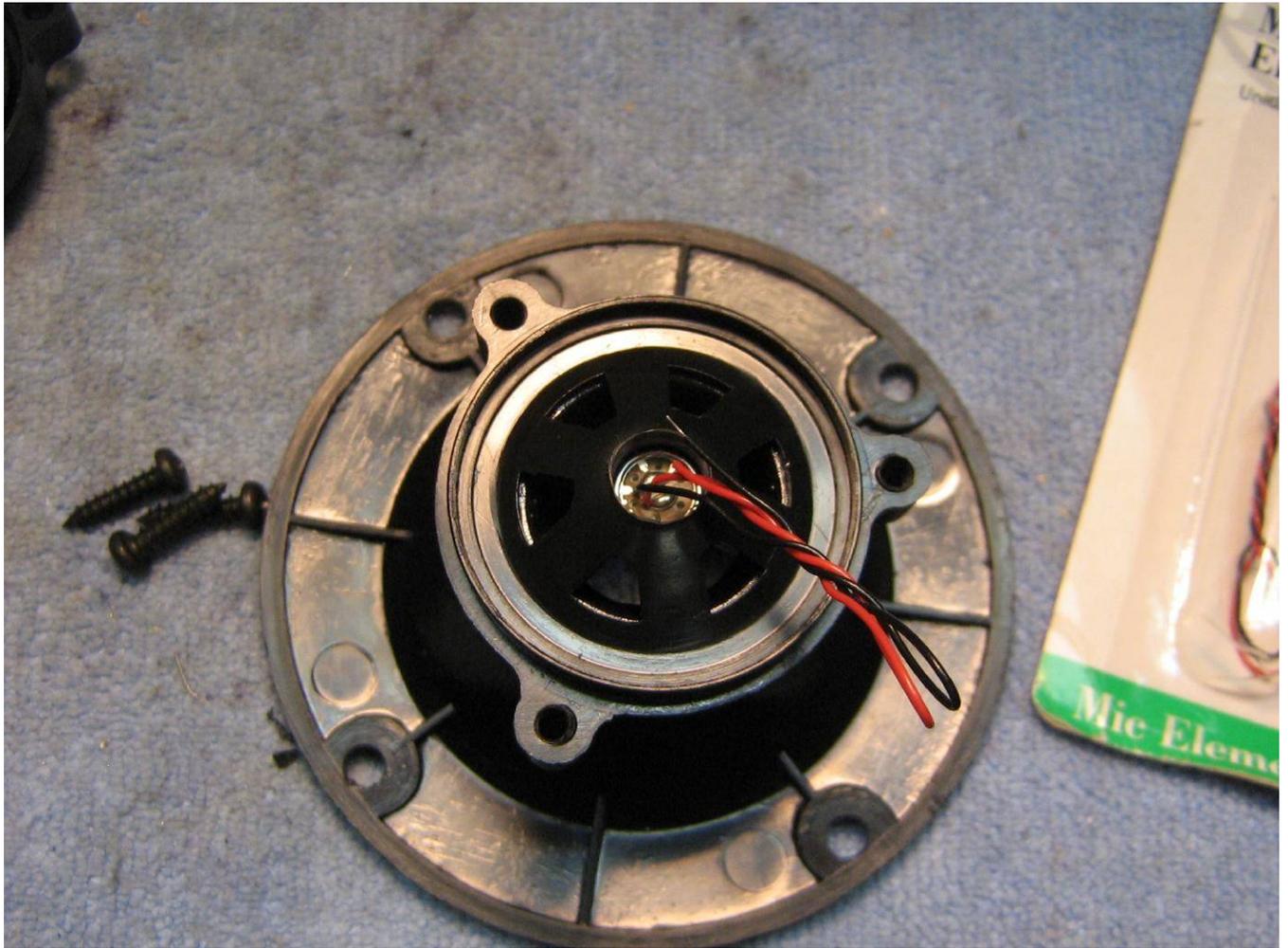
For maximum performance of the preamplifier circuit, you should use 1% metal-film resistors and non-polarized or film-type (5% tolerance) coupling capacitors throughout the circuit. A large ground plane on the PC board is *required* to prevent the circuit from oscillating uncontrollably. The circuit can oscillate a bit when tuned for maximum boost at frequencies above 2 kHz. Try to keep all the wiring going to the potentiometers as short as possible.

Pictures & Construction Notes



Overview of the 3.5-inch round plastic horn tweeter and electret microphone element which will be mounted inside of it.

You can salvage suitable tweeters from old speakers or purchase similar ones from places like MCM Electronics or All Electronics for a few dollars.

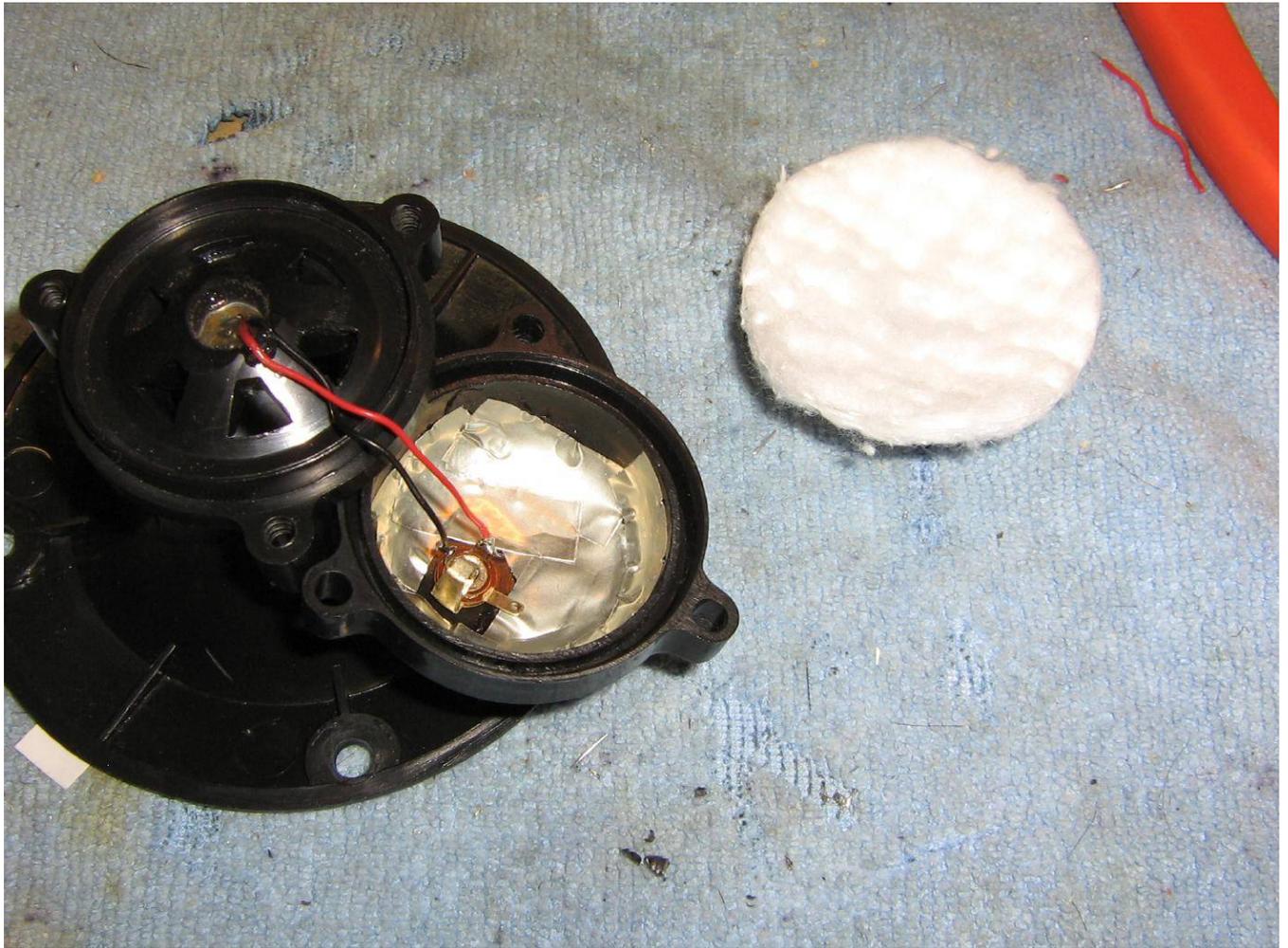


Remove the piezo driver element from the rear of the horn tweeter by removing the three screws and the plastic dome cover.

Drill a hole the same diameter as the electret microphone element into the center plastic sprue of the horn tweeter.

Insert the microphone into this hole and secure it in place with some RTV sealant.

Be sure the connecting wires for the microphone are exposed!

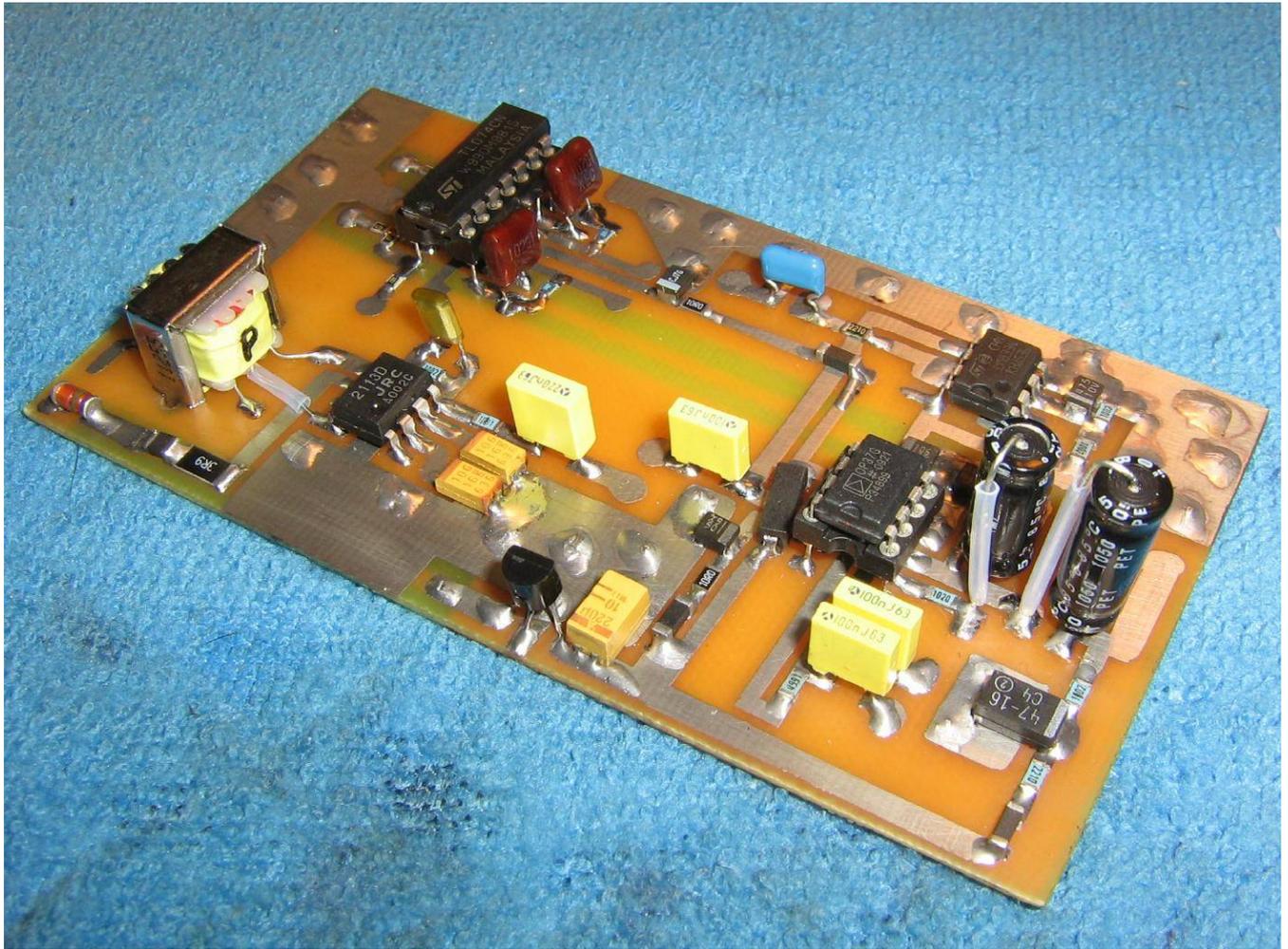


Putting it back together.

You may wish to add a 3/32-inch jack on the rear plastic cover of the horn tweeter for a convenient connection to the microphone element. This is optional, but handy.

A few strips of metallic tape were added inside the rear cover to help shield it a bit from RF interference.

A couple of roughed-up cotton makeup remover pads were slipped inside the rear cover to dampen any incoming audio which may be off-axis from the microphone's pickup.



Overview of the GBPPR Parabolic Microphone amplifier circuit.

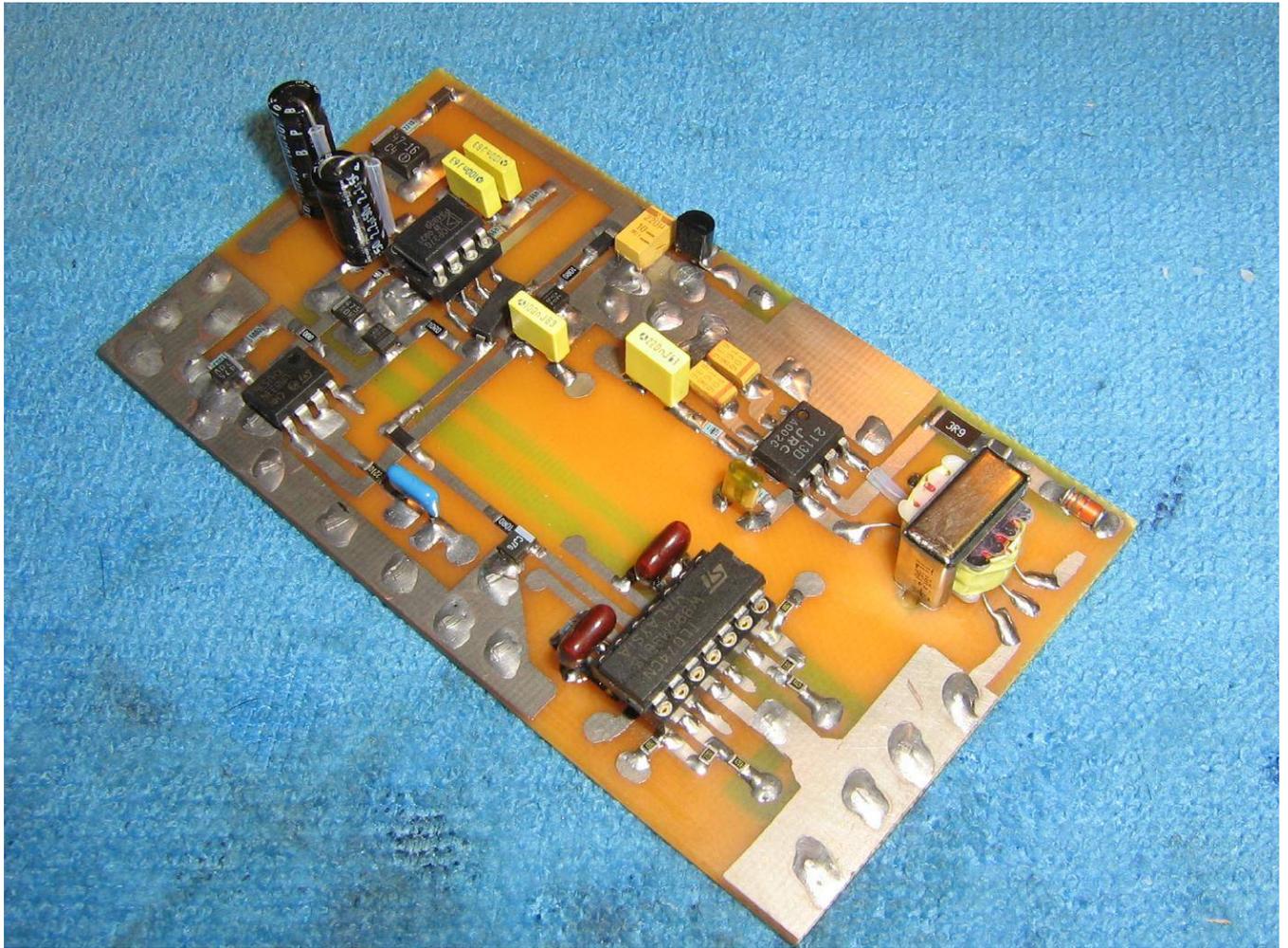
It's a standard low-noise op-amp design, but with two tunable frequency gain stages in the op-amp's feedback network.

The audio gain is around 40 dB when not in "boost" mode, and can reach the open-loop gain of the op-amp for a particular frequency when tuned for maximum boost. This can be over 80 dB in some op-amps.

A NJM2133 low-noise audio power amplifier provides another 20 dB of gain and can drive a pair of standard headphones or a speaker.

An optional **Line Output** is available for connecting the amplified audio output to other devices, such as a record or soundcard.

A 78L09 voltage regulator provides a clean source of +9 VDC for the op-amps and microphone bias.



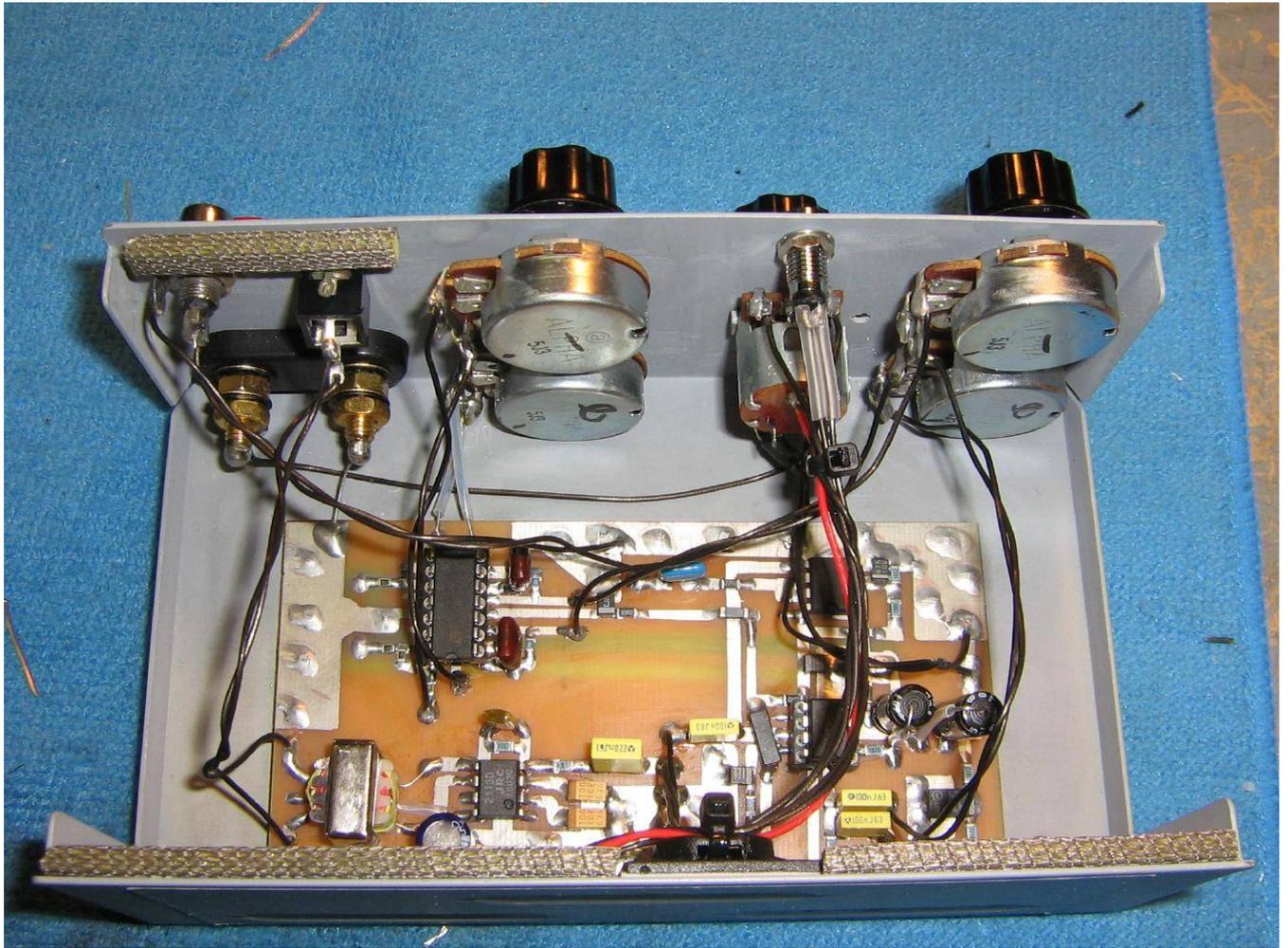
Alternate view.

The JRC NJM2113 low-noise audio power amplifier and Xicon/Mouser 42TL004 isolation transformer are on the lower-right.

The TL074 quad op-amp for the tunable frequency gain stages is on the lower-left.

Panel-mounted 1k ohm and 250k ohm potentiometers determine the boost level and frequency of the tunable gain stage.

The tunable frequency range is from around 700 – 3,500 Hz. Because parabolic microphones tend to be swamped with low-frequency noise, it's ideal for a bit of high-pass filtering to take place in each of the gain stages.



Mounting the circuit board inside an old printer switch case.

The banana jacks on the upper-left are for the +12 VDC power input.

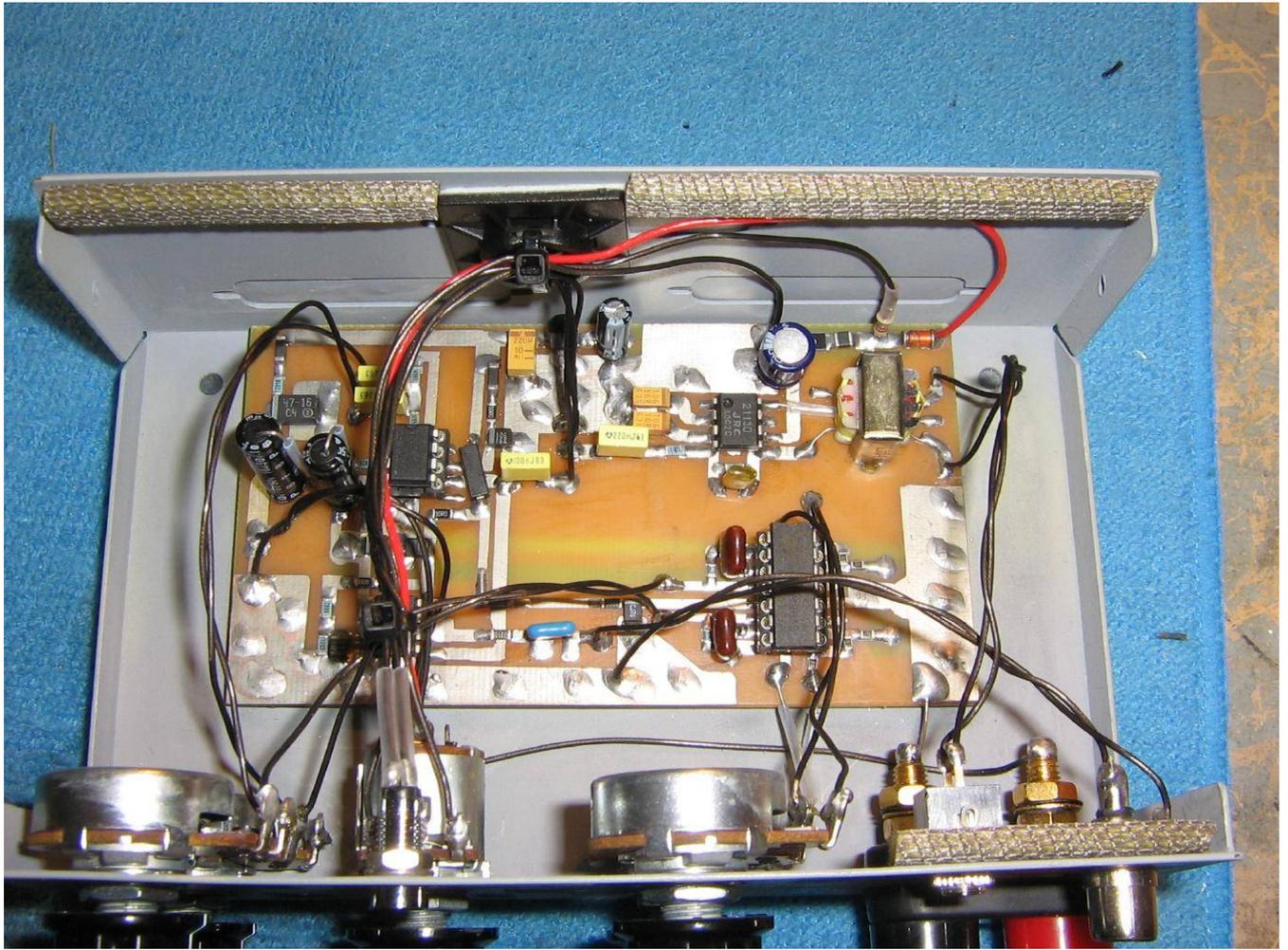
The **Lo-Z Output** (headphone) and **Line Output** jacks are above the banana jacks.

The **Band 1 Boost** and **Band 2 Boost** 1k ohm potentiometers are on the upper-left.

The 10k ohm **Volume/Power** potentiometer is mounted in the middle. It has an integrated on/off switch for circuit power.

The **Band 1 Frequency** and **Band 2 Frequency** 250k ohm potentiometers are on the upper-right.

A 1/8-inch jack for the microphone input is underneath the **Volume** potentiometer.



Alternate interior view.



Completed front-panel overview.

Standard 1/8-inch jacks are used for the **MIC Input** and **Lo-Z Output**.

A RCA jack is used for the **Line Output**.

There is a red power-indicating LED above the **Volume/Power** control.



Overview of the main plastic parabolic reflector and an aluminum wok lid which will be used for mounting the parabolic reflector.

For a source of the plastic parabolic reflectors, search for "Parabolic Project Reflector Dish Microphone Science Output Nature Recording" on eBay. The user selling them is "sdill471."

A few coats of camouflage spray paint should be added to the parabolic reflector to help knock down its glare.



The aluminum wok lid will be mounted behind the plastic parabolic reflector to act as a mounting point and to prevent the parabolic reflector from flexing.

It's a bit of a hack, but it seemed to work out quite well.



Overview of the parabolic reflector mounting hardware.

Standard 1/4-20 hardware with fender washers.

Some optional rubber washers can be mounted between the fender washer for vibration damping.

A 1/4-20 coupling nut will protrude from the rear of the parabolic dish to act as the final mounting point.



Overview of the mounting hardware for the horn tweeter.

Standard #8-32 hardware will be used along with some rubber plumbing washers for vibration damping.



Mounting the horn tweeter at the focal point of the dish.

It's 3.75-inches from the bottom of the dish to the lip of the horn tweeter. This places the focal point just inside the horn tweeter.

You may wish to experiment with the focal point positioning for maximum audio performance.



Rear view of the parabolic dish after all the mounting hardware has been added.

You should remember to drill a hole to pass the connection wires for the microphone element.



Drill a 1/4-inch hole in the bottom of the wok lid for attachment to the coupling nut coming out the back of the parabolic reflector.

You should also drill a hole for a panel-mount 3/32-inch or 1/8-inch jack for the microphone connection.

Some window insulation foam tape was added to the rim of the wok lid to aid in vibration damping.



The wok lid is attached to the parabolic reflector using a 1/4–20 bolt and a L–bracket.

The L–bracket allows the parabolic dish to then be attached to a standard camera tripod.

You may want to improve this mounting design a little bit. The key is to reduce any source of vibration in order to eliminate the low–frequency "rumble" which will override the target audio signal.



Overview of the completed GBPPR Parabolic Microphone.

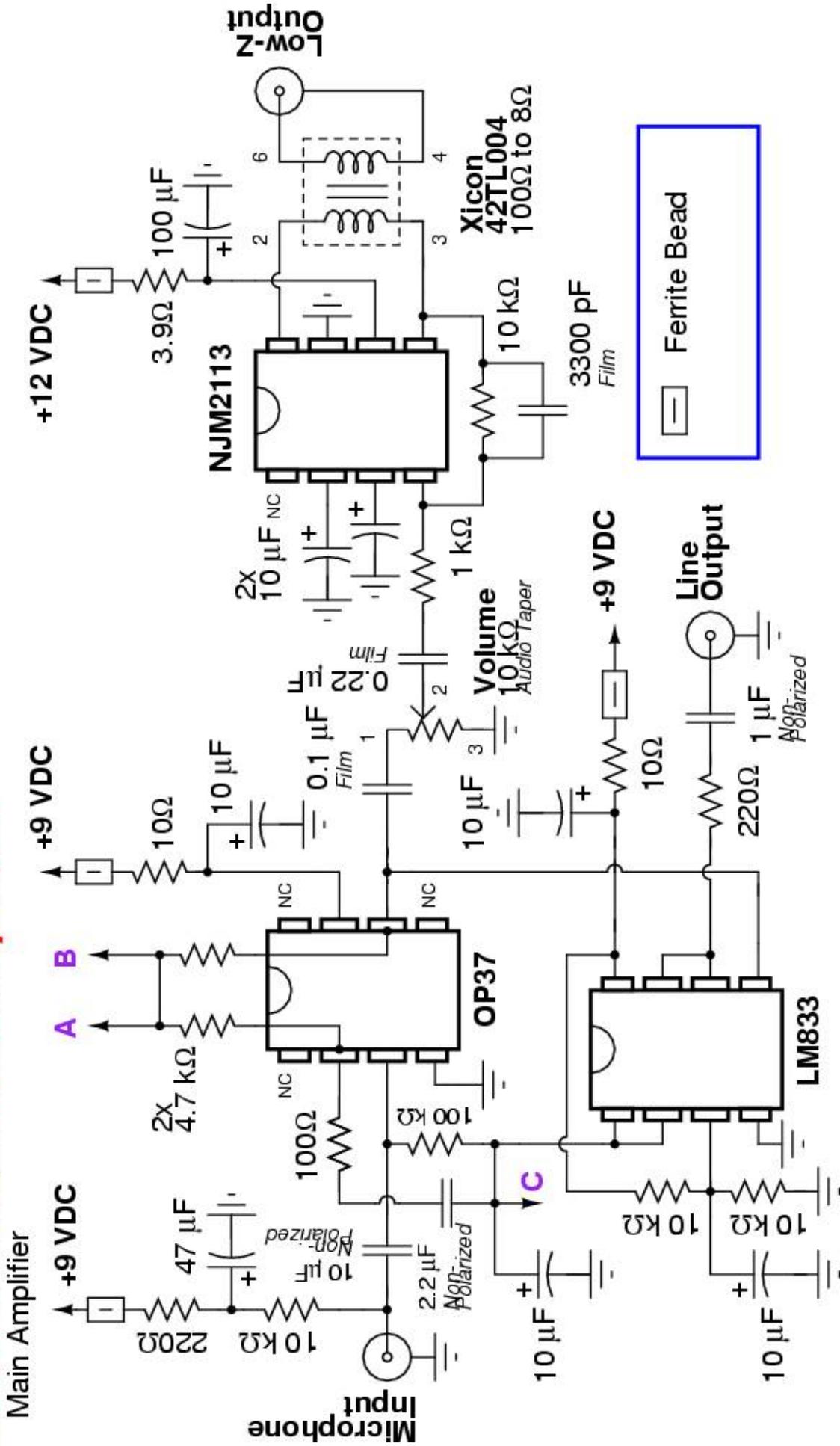
To operate the amplifier, apply the DC power and set the **Volume** control to a usable setting.

Turn both the **Band 1 Boost** and **Band 2 Boost** controls to their minimum boost level (counter-clockwise).

Point the dish in the direction of the target audio and tune the **Band 1 Frequency** and **Band 2 Frequency** controls into the frequency range of the target audio.

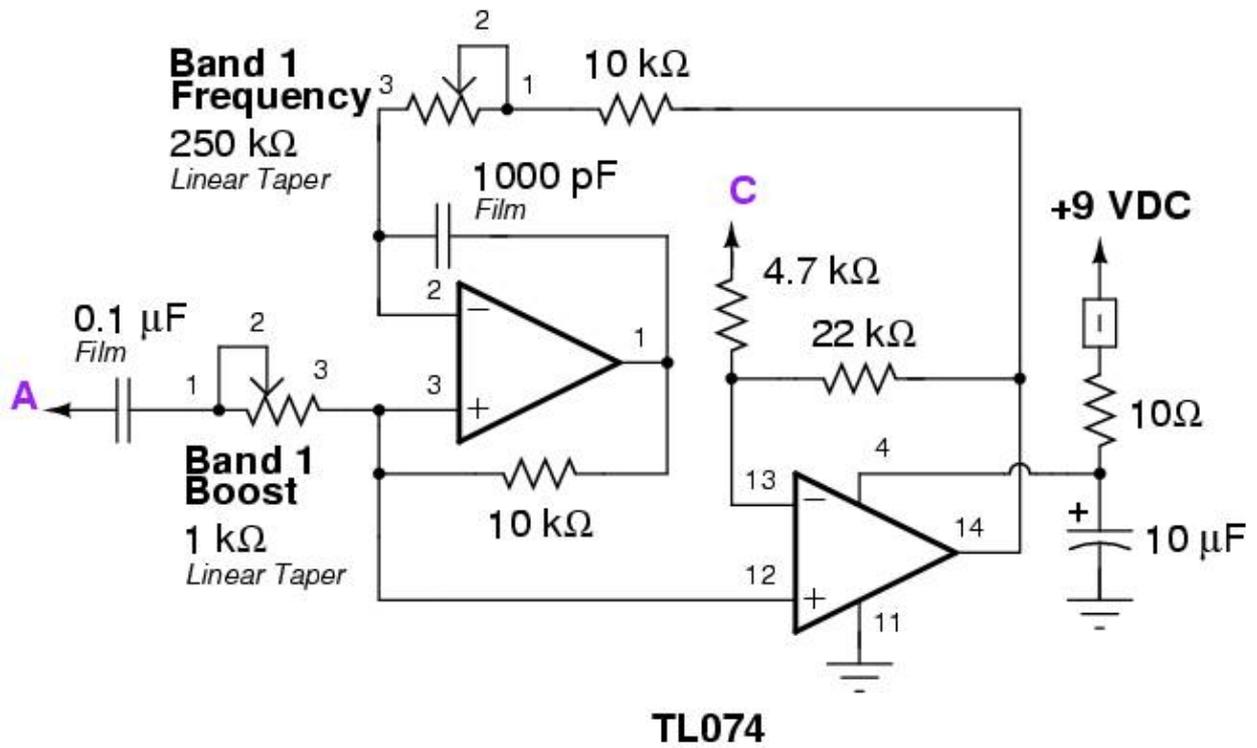
Slowly increase the **Band 1 Boost** and **Band 2 Boost** controls to help bring out those particular frequencies. Retune the **Band 1 Frequency** and **Band 2 Frequency** controls, if necessary.

GBPPR Parabolic Microphone



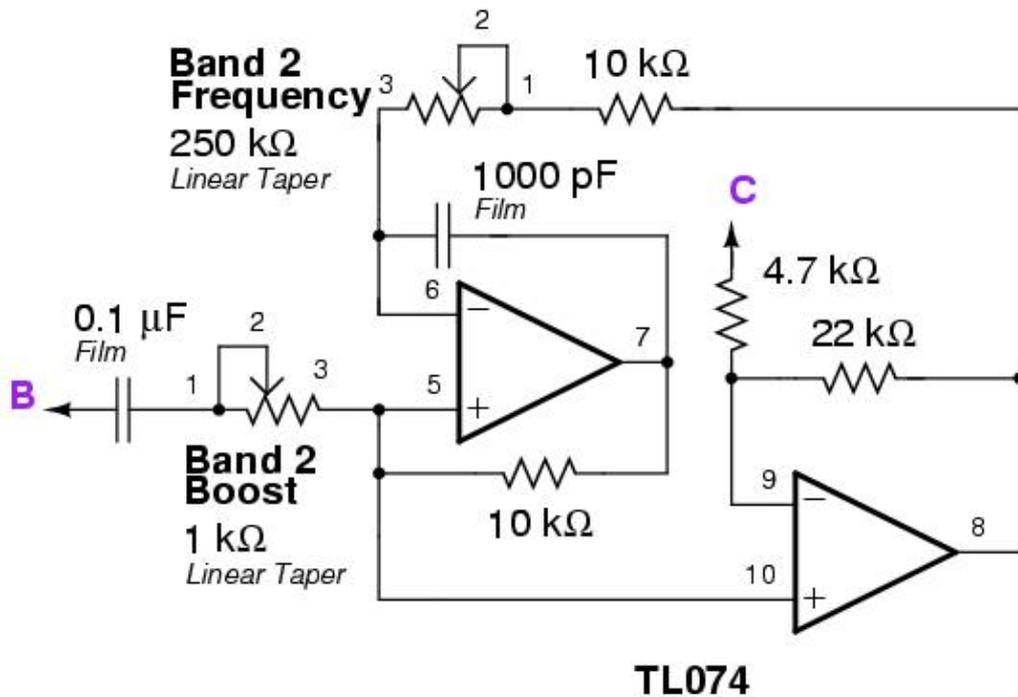
GBPPR Parabolic Microphone

Tunable Gain Stage 1



GBPPR Parabolic Microphone

Tunable Gain Stage 2



Overview of the GBPD's "Nuisance Abatement" Vehicle

Overview

ZOG's latest surveillance toy comes to Green Bay, Wisconsin.

Instead of actually doing their jobs, the lazy union fucks (i.e. police) are now parking this monstrosity around various parts of the city in order to keep a "video eye" on things.

You can imagine how this going to work out...



General overview.

They call it a "Nuisance Abatement" vehicle or the "Armadillo."

It's an old SWAT-type vehicle (Bearcat, I think) with four cameras mounted on top, presumably connected to some type of digital video recorder and probably a large battery source.



Passenger-side overview.

The four video cameras are mounted on top of the vehicle in aluminum housings with a clear polycarbonate cover.

Each camera faces a different direction: front, rear, passenger-side, and driver-side.



There is P.A. speaker and a winch mounted on the front bumper.

There are also a couple of rotatable spotlights mounted on top of the vehicle... and even a turret!

There is also a short piece of exposed (orange) AC power cord. I thought this was just a standard block heater connection, but it may be a source of external 120 VAC power from an inverter.

If it is, connecting a resistive load – like a space heater – to this power source will help to drain the internal batteries...



Driver-side overview.

Might have to tack weld the door hinges just to piss them off...



Rear overview.

Call 920-432-STOP (920-432-7867) and ask them why employees within the Green Bay Packers' organization are creating LLCs (to hide behind) which they are then using to buy up property surrounding Lambeau Field.

These employees then sell that *same* property (through their LLC) back to the Green Bay Packers' organization at *much* higher prices!

Let them know this source of insider real estate trading is illegal, especially when they are begging the taxpayers to fund their little stadium projects...

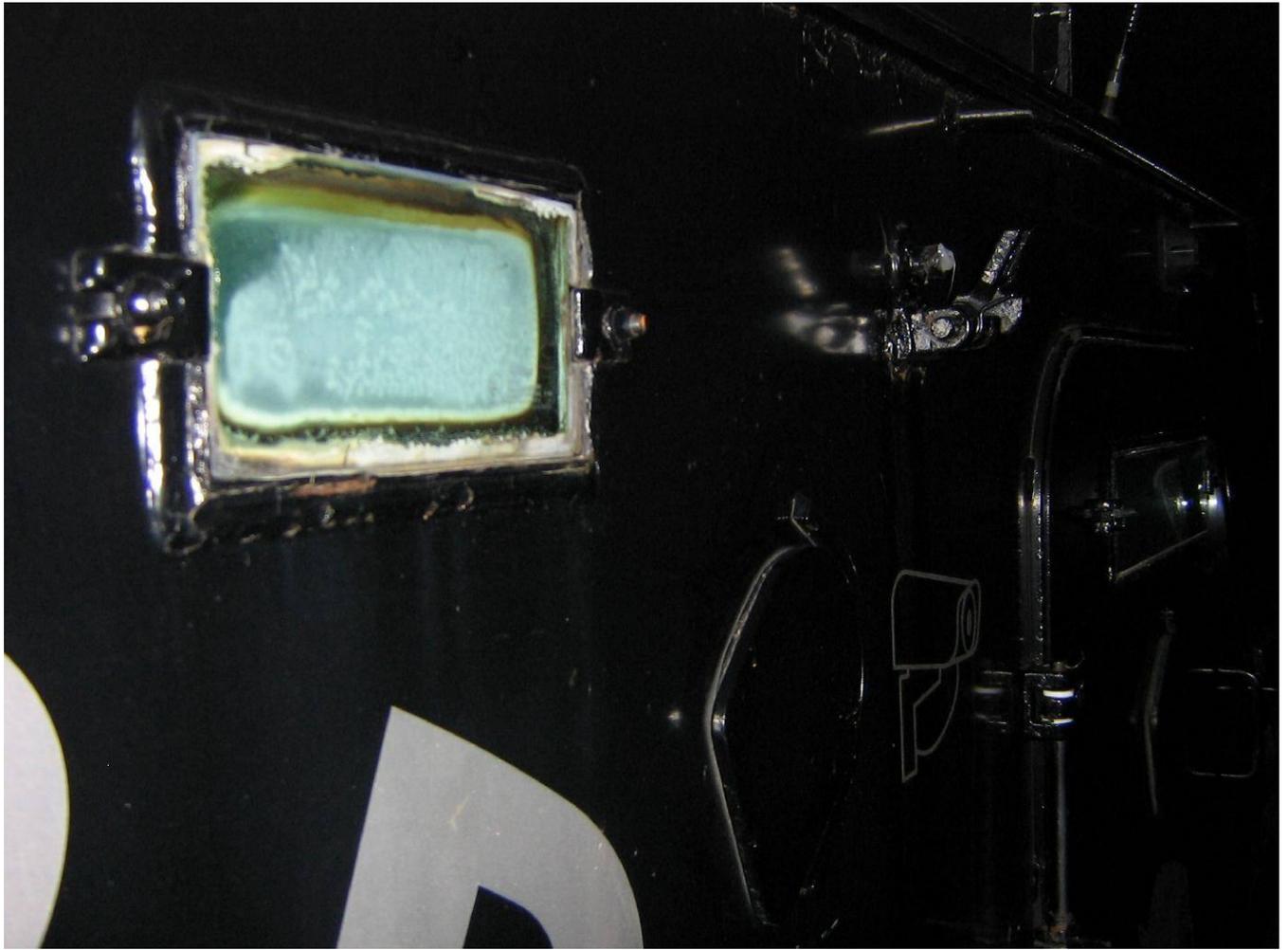
Don't expect to get an answer!



Rear-underside view showing the armored fuel tank.

Oh, the joys of union mechanics...

All the rust means you'll need to increase your voltage if you plan on disabling the vehicle using direct high-voltage pulses.



Closeup view of the stock viewports, which appear to be faded over.

I don't believe they are used for any video cameras.



Overview of the top-mounted gun turret.

This is where you'd want to place the thermite...

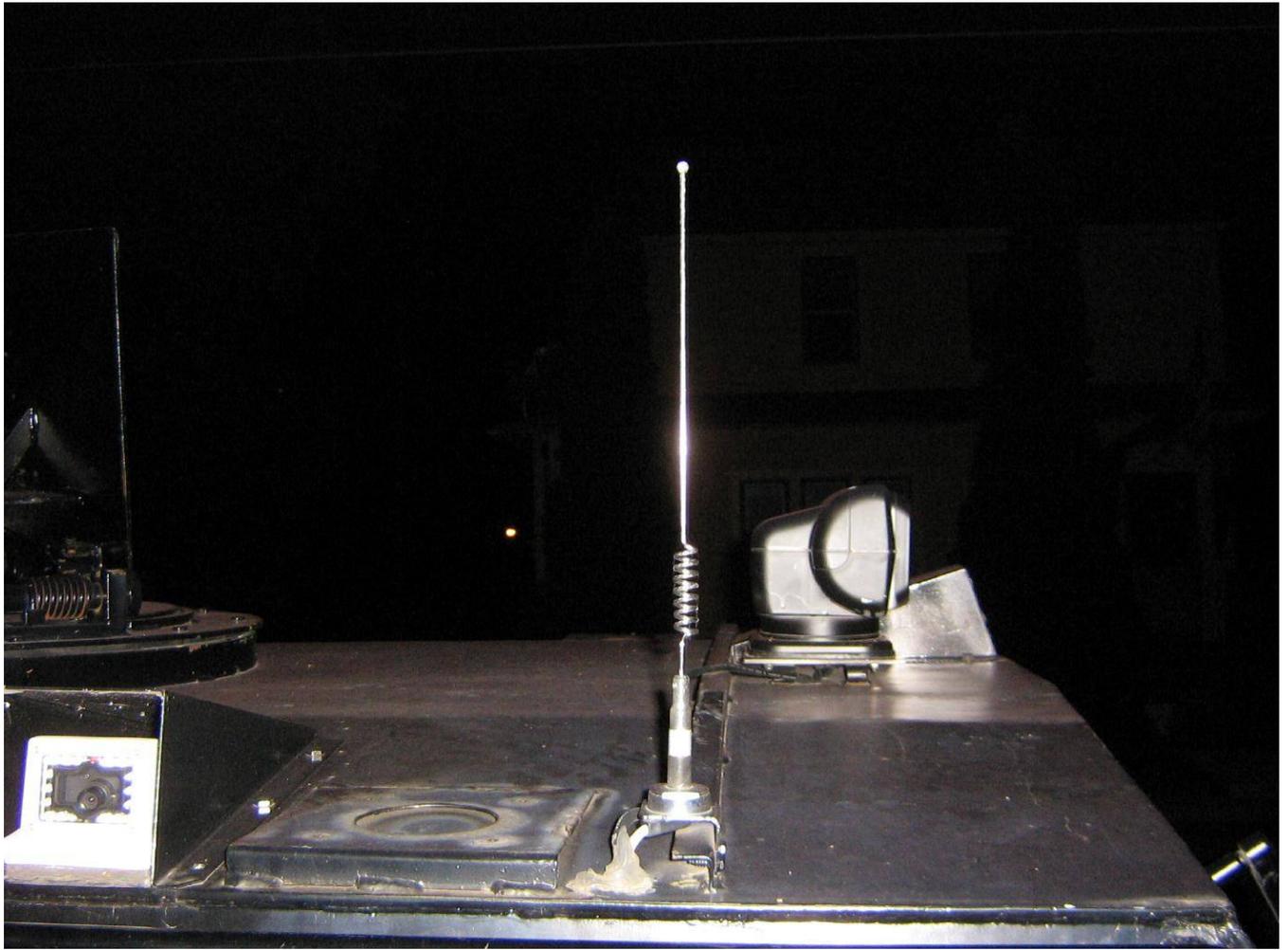
Unless they mount a gun on top which shoots out one-way tickets back to Africa, all this nonsense will just result in a never-ending cycle where we will all lose our freedom.



Driver-side interior view.

You can probably start the interior on fire using a large parabolic mirror.

It may even be possible to remove the windshield by fiddling with those exposed bolts...



Overview of the top-mounted antenna.

Appears to operate in the UHF/800 MHz band. Yes, the coax is exposed!

Passenger-side camera is to the left and a spotlight is in the rear.



Under the front passenger-side showing the exposed wires behind the P.A. speaker.

Might be fun to hook a scanner up to the speaker and broadcast police radio traffic.

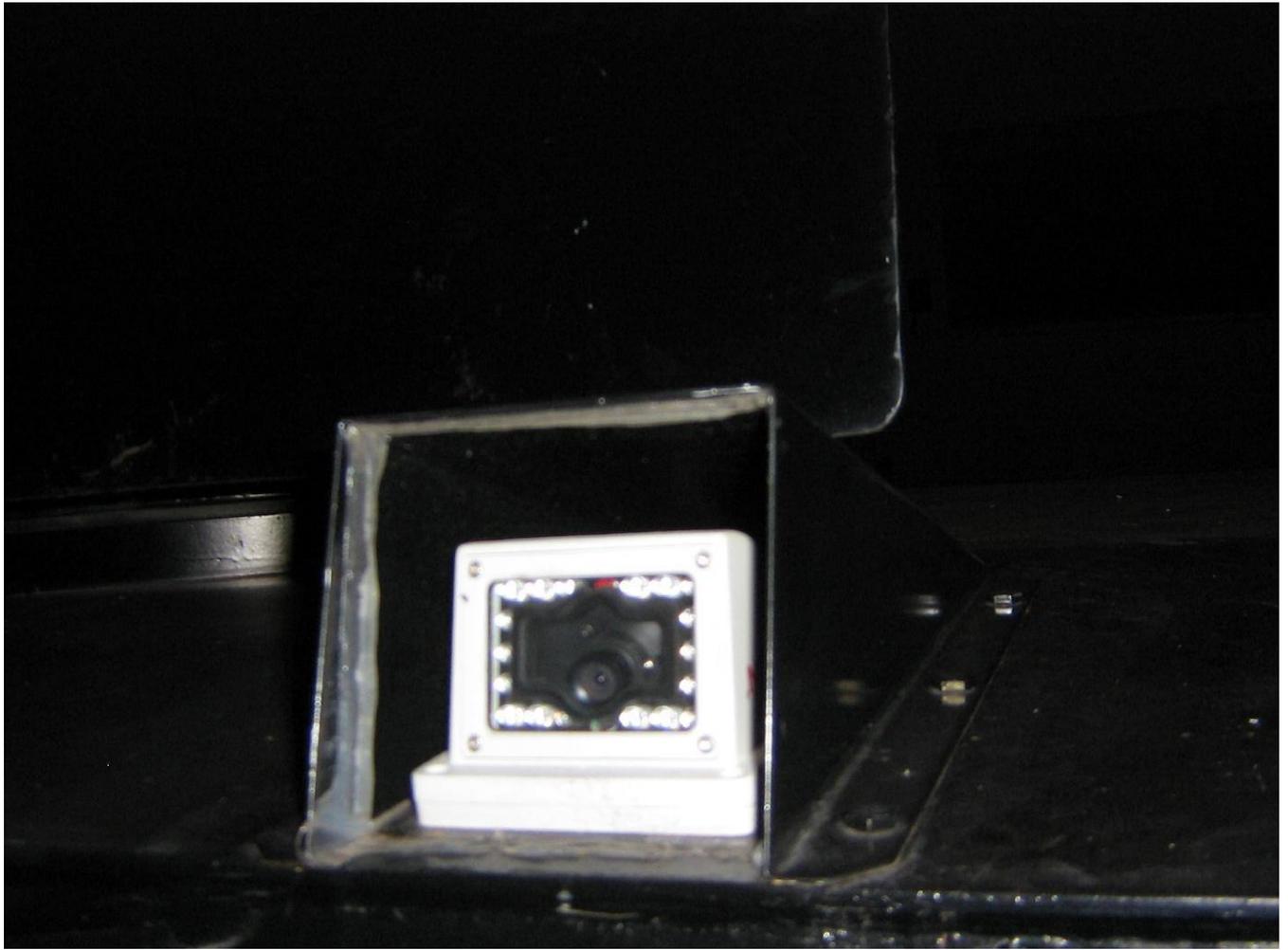


Overview of one of the cameras.

All the cameras appeared to be the same. They are nothing special, and the taxpayers paid *WAY* too much for them.

The GBPD claim it contains "\$8,000 worth of video and audio surveillance," but anyone with an I.Q. greater than a cop could have installed much higher quality hardware for just a few hundred dollars.

The cameras are surrounded by infrared LEDs for active illumination at night.



The camera housings have their mounting bolts exposed, should you wish to further explore the camera's wiring...



You can identify the active cameras by viewing their infrared illumination LEDs.

Do this by using a video or still camera with its internal infrared blocking filter removed.

You can also use the 1059 Preamplifier and 1059IR Detection Probe to "listen" for the noise attenuation caused by the active infrared LEDs.



Now, the part you wanted to see... how to disable the cameras!

Use a small piece of black cardboard to cover the camera's view and hold it in place using the magnet from an old microwave oven magnetron.

That's it!

The white label says "Tyranny Protector."

You should also slap a few "Ron Paul" stickers over the cameras and spray paint "prothink.org on the side.

Related Video

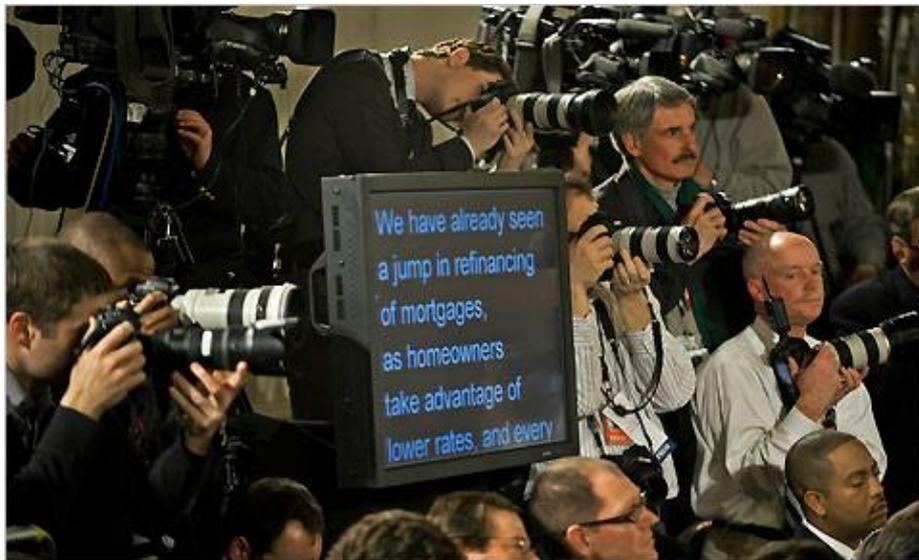
Corrupt Green Bay Police Deploy the Armadillo:
youtube.com/watch?v=FFOINlw0xSc

Installing a "Tyranny Protector" on the Green Bay Police Dept's "Nuisance Abatement" Vehicle:
youtube.com/watch?v=ftK5_6XJsX4

Bonus



Hoots and hollers about outsourcing jobs.



Reads from a teleprompter made using parts not produced in the U.S.

It's time to insource a *REAL* American to be our president!

Don't re-nig in 2012!

End of Issue #99



Any Questions?

Editorial and Rants

Good example of how the liberal/Jew media covers up the failings of the Black race. Now they are trying to blame all the niggers killing each other in Obama's Chicago on the temperature! Funny, it gets hot in a lot of other places and they don't seem to worry about being killed... Gee, I wonder why? Change!

Chicagoans Trapped Between Heat and Crime

June 21, 2012 – From: cbsnews.com

by Dean Reynolds

(CBS News) CHICAGO – The sun is showing no mercy. The mercury soared again Thursday in the central and eastern United States, with temperatures in the 90s and over 100. The weather service put out a heat advisory for much of the region, including Illinois. The temperature in Chicago hit 103, breaking a record that had stood for more than a century.

And the heat wave may be aggravating a crime wave. There were 22 more shootings in Chicago overnight, five of them deadly. So far this year, the city has had 272 homicides. We take a look at crime in the heat of the night.

The victims of Chicago's increasingly bloody summer are trapped now between a plague of gangland violence and the onset of triple-digit heat.

Ten-year old Kitanna Peterson was out late Tuesday night on the far west side playing at a fire hydrant when she was shot. A stray bullet went through her wrist and abdomen.

"You know what kind of a man do that? A fool. But he'll be caught," said the girl's uncle, Homer Hardiman.

Many of the nearly two dozen wounded in the past 24 hours were — like Kitanna — outdoors and seeking relief from the scorching temperatures at what turns out to be exactly the wrong time of day. Statistically, 9 p.m. to 2 a.m. are the most murderous hours in this city's poorest neighborhoods where gangs thrive.

"Crime is unfortunately very concentrated in lowest income neighborhoods in the city," said Jenz Ludwig, who runs the University of Chicago crime lab. "Those are the neighborhoods where people are least likely to have air conditioning or adequate air conditioning."

The Chicago temperature reached 103 degrees Thursday afternoon. In fact, it's gone over 100 degrees for three straight days here. Researchers say that kind of heat triggers chemical changes in our bodies --- such as an increase in testosterone --- that can boost aggressiveness.

"That kind of problem is particularly dangerous in an environment when you have a lot of gangs and a lot of guns on the streets," said Ludwig.

Kitanna Peterson is in the hospital now recovering from her wounds. And on Thursday afternoon, a brief shower sent the thermometer down just a bit, providing some relief from the heat. But providing relief from the violence will require more than a few rain drops.

Don't worry Chicago, Obama's got your back!



LOL! More "racial profiling" by the Obama regime.

I'm sure the Jews at the ACLU are gearing up for a slam-dunk lawsuit win against Obama...



Good to see people standing up to Obama's billionaire banker Jew puppet regime.

Unfortunately, they are in Egypt!

Remember when people were hired based on their performance? Seems like a million years ago, doesn't it? Change! Well, at least this is in Eric Corley's New York City, so no one really cares if that third-world shithole burns down.

I'm still waiting for a judge to declare there are too many Jews in Hollywood or on the Board of Directors of the Federal Reserve System...

Federal Judge Imposes Racial Quota on FDNY

July 16, 2012 – From: cnsnews.com

by Elizabeth Harrington

(CNSNews.com) – A federal judge is ordering the New York City Fire Department to implement racial quotas to address grievances from minorities who failed entrance exams.

On July 5 in Brooklyn, Nicholas G. Garaufis, a Clinton-appointed judge for the Eastern District of New York, issued a ruling that requires two of every five newly hired fireman to be black and one of every five, Hispanic -- until the department has fulfilled the court-ordered quota of 186 black and 107 Hispanic hires.

The ruling allows back pay -- totaling an estimated \$128.7 million -- for minorities who failed written tests.

The court order is a response to a lawsuit alleging that two placement exams (Written Exams 7029 or 2043) for the FDNY were discriminatory against blacks and Hispanics, because fewer minorities passed the exam than whites.

The Justice Department's Civil Rights Division is responsible for prosecuting cases under Title VII of the Civil Rights Act of 1964. The DOJ claims the written exams had an "unlawful disparate impact," causing fewer minorities to be hired.

"Title VII of the Civil Rights Act of 1964 prohibits not only intentional discrimination, but also employment practices that appear to be fair in form but are discriminatory in operation," the Department states in a fact sheet on the FDNY case. "A facially neutral employment practice, such as a written examination, that disproportionately excludes individuals from employment opportunities on the basis of their membership in a protected group, such as a particular race or national origin, and cannot be shown to be related to job performance, violates Title VII."

Judge Garaufis ruled that any black or Hispanic individual who failed either written exam with a score of 25 out of 100 or higher is eligible to receive place on the priority hiring list as well as damages, including "non-economic damages."

Non-economic damages are intended to compensate for the "lost intangible benefits of being a firefighter." The intangible benefits include "prestige, job satisfaction, camaraderie, unique excitement, enjoyment of flexible scheduling, unusual employment stability, feeling of security derived from retiring with a full pension and lifetime medical benefits, and the potential for career advancement."

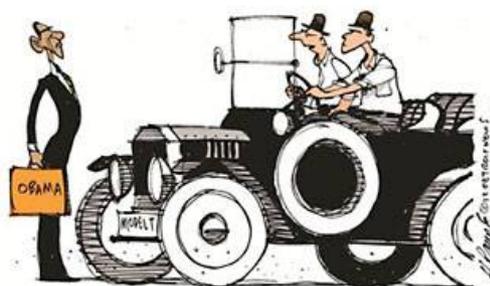
All new hires must pass an updated test -- Exam 2000 -- as long as it is found to comply with Title VII of the Civil Rights Act, the ruling states.

Further, Judge Garaufis ruled that minorities who were not hired because they failed the entrance exams must be paid a "retroactively higher salary" and receive "retroactive seniority" once they are hired through the new quota system. Retroactive seniority affects accrual of vacation and sick leave, among other benefits.

The Bush Justice Department filed suit against the FDNY in May 2007, challenging the exams that were first administered in 1999 and 2002. In July 2009, Judge Garaufis ruled that New York City had violated Title VII of the Civil Rights Act, and then in 2010 he found the city liable for "intentional discrimination against black applicants," according to the DOJ.

In a previous ruling, Judge Garaufis accused the FDNY of being a "bastion of white male privilege."

"While the City's other uniformed services and fire departments across the country have changed to reflect the communities they serve, employment as a New York City firefighter — arguably 'the best job in the world' — has remained a stubborn bastion of white male privilege," Garaufis wrote in October 2011.



"He says you're not so smart. He says you owe your success to government, Mr. Ford."