The Ghost Box

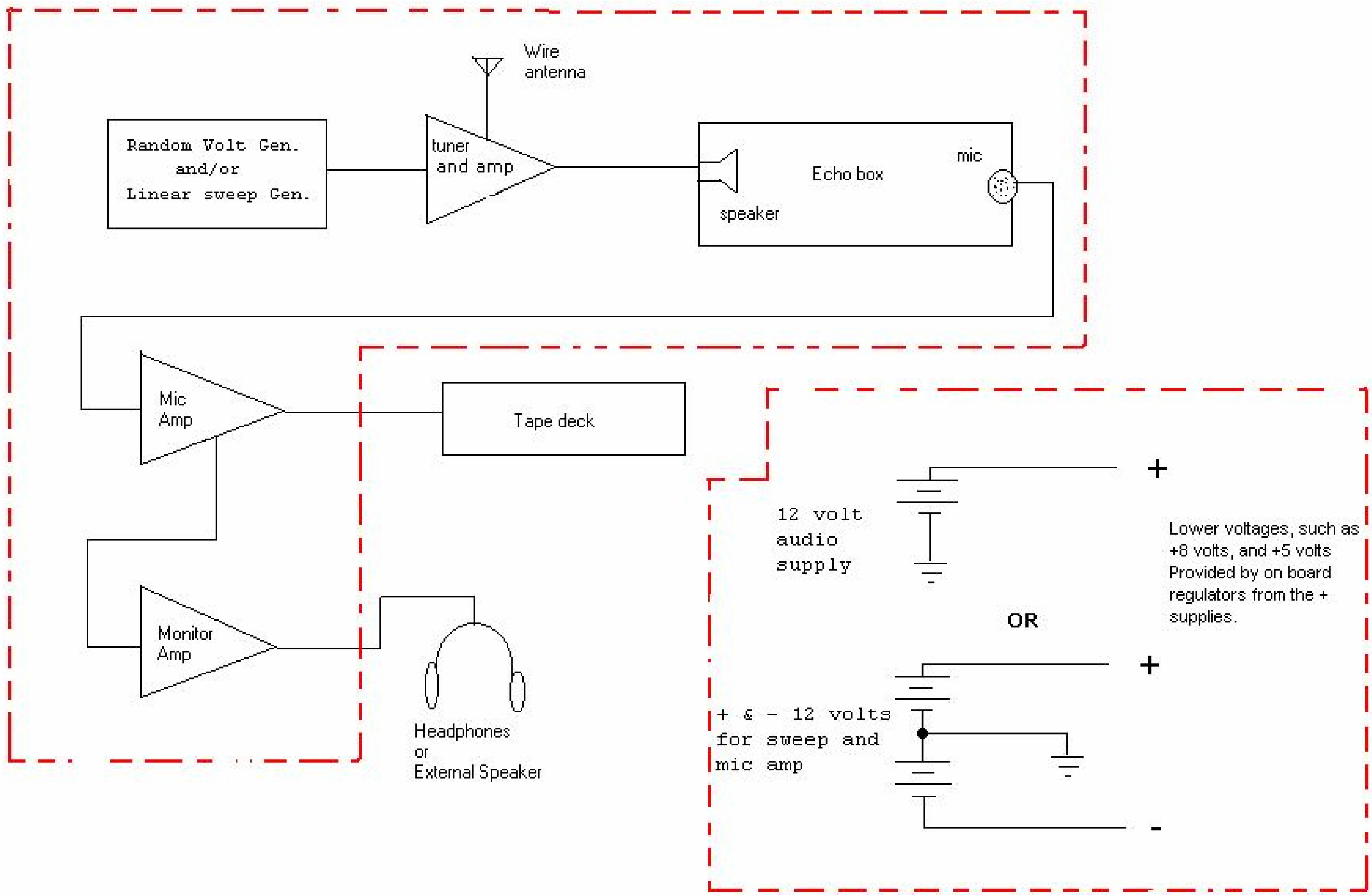
A notebook

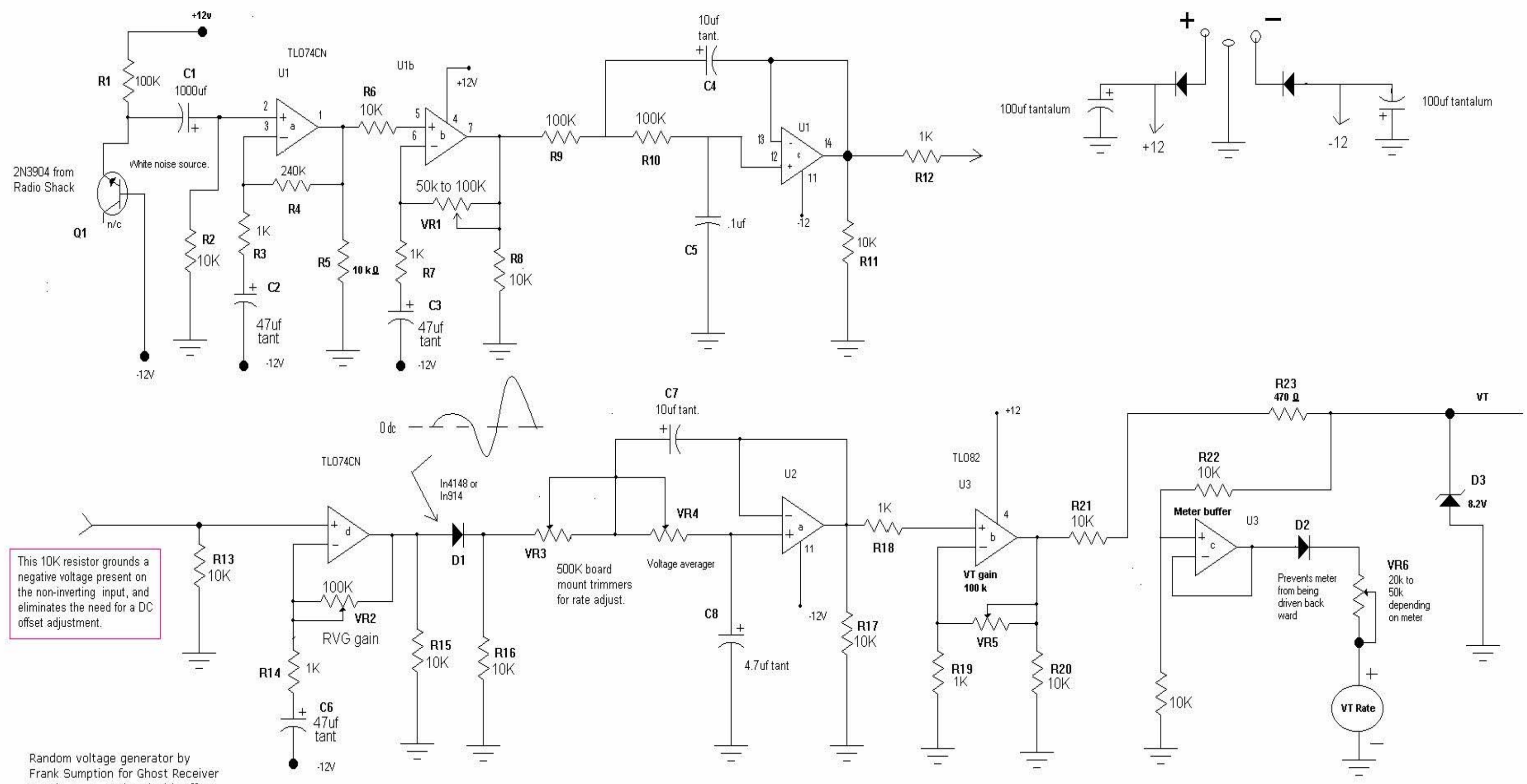
The "Ghost Box," as it has come to be known, is an electronic method of sprit communication best categorized under Instrumental Transcommunication (ITC). ITC is the use of electronic video and audio equipment to communicate across dimensions with discarnate human and animal spirits, and other entities that claim nonhuman status.

In 2002, after two years Electronic Voice Phenomenon (EVP) experimentation work using various methods, I began to use a program called EVPmaker, invented by the German researcher Stefan Bion. I frequently received messages that appeared to be relayed by computer-savvy spirits from other spirits who apparently could not use the computer. I pondered what else I might use for spirit communication that all spirits could use, and shortly, the idea for my system popped into my head fully formed. All I had to do was build it.

The system uses white noise that is amplified, filtered, and rectified to provide a random voltage to tune voltage-tunable radio receiver-modules that were removed from older digital car stereos. The randomly tuned radio modules provide a source of random audio that is sent to an enclosure I call an echo box, for lack of a better name. The idea of the echo box was received by what I can only call telepathy, which indicated to me that there is at least some "outside" guidance working in tandem with the electrical components of this system.

In my opinion, it is the random audio that allows the spirits and other entities to form their voices. White noise works because of this random principal, but random material that contains human speech frequencies and fragments works much better, and more consistently, possibly because some kind of resonance on the quantum level is taking place—akin to using the quantum soup of the universe as a carrier. I'm not a physicist, so can only guess; accordingly, I can just barely describe how I think this equipment works.


Random Volt Gen.
and/or
Linear sweep Gen.
tuner
and amp
Wire
antenna
Echo box
speaker
mic
Mic
Amp
Tape deck
Monitor
Amp
Headphones
or
External Speaker
12 volt
audio
supply
+
OR
+ & - 12 volts
for sweep and
mic amp
+
-
Lower voltages, such as
+8 volts, and +5 volts
Provided by on board
regulators from the +
supplies.



Random voltage generator by Frank Sumption for Ghost Receiver March, 2004. Updated with offset adjust March 2005

Updated 2/2007

The 8.2 volt zener keeps the tuning voltage, VT form going beyond the limits of the tuner's range.

All fixed reisitors 1/4 watt, 5%. Polarized caps are 16 volt.

All variable resistor are board mount trim pots, except for volume control, and VT tuning rate control.

Use sheilded wire btween each stage to prevent the noise form getting into the audio sections.

It's the 47uf tantalum caps that have the largest impact on how the circuit performs. Consider these critical, allthe rest could be aluminum caps if absolutely needed, but I recommend tantalums throughout.

If the RVG gain pot is too large the output will tend to go into a low frequency oscillation, rail to rail.

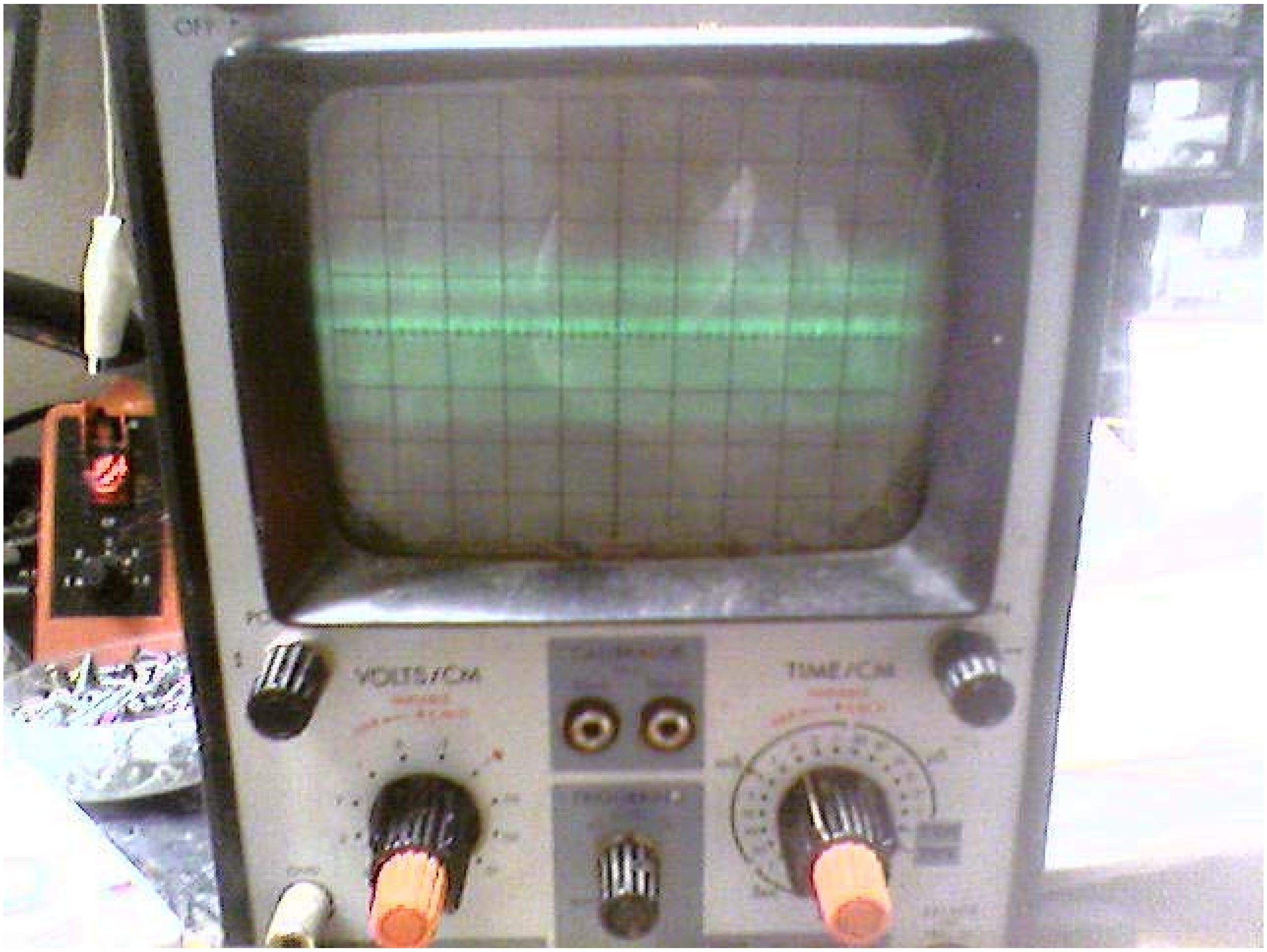
The RVG Circuit

On the preceding pages you will find a block diagram Ghost box and schematic of the Random Voltage Generator. This is the system that develops the random tuning voltage (VT). Transistor Q1, connected in reversed biased emitter-base, generates a low-level white noise signal of .03 to .04 volts peak to peak. This signal is capacitively coupled by C1 to the input of the first TL074 op amp. The op amps are configured in high impedance mode using R3-C2. The combination of R3 and R4 set the gain of the stage at roughly 240 times.

I have found by experimentation (cut and try) that the capacitors C2, C3, C4, C7, and C8 should be solid tantalum for best operation. Aluminum electrolytics can be used, making C2, C3, and C6 at least 100uf. The other capacitors cannot be larger without adversely affecting the filter characteristics. Most of the capacitors that I use to test the circuits with are scavenged from old computer hard drives and other computer boards as a way of minimizing costs. I use the small rectangle capacitors on perf board by making a small loop of wire though two of the holes, then placing another loop three or four spaces, or $1/10^{th}$ inch increments, away depending on the size of the cap, and surface soldering the cap to the tops of the loops. This allows an economical way to prototype the boards for testing. I also recommend using plug-in breadboards, if you have some of large enough size.

After the white noise is amplified through two stages, the high-frequency components are filtered out in the low-pass filter consisting R9, R10, C4, and C5, along with the op amp stage. The following stage amplifies this low-frequency random voltage up to about 4 volts peak to peak. It is the level of this low-frequency random voltage that is determined by the previously mentioned tantalum capacitors. If the capacitors are too small, there will little, if any, amplification of the low frequency components, and therefore almost no signal out of the first low-pass filter. In this condition, large gains are required in the RVG amplifier, this often resulting in the stage going into a low-frequency oscillation as noise spikes drive the output from rail to rail (+ and – supply). The result is VT meter stays high.

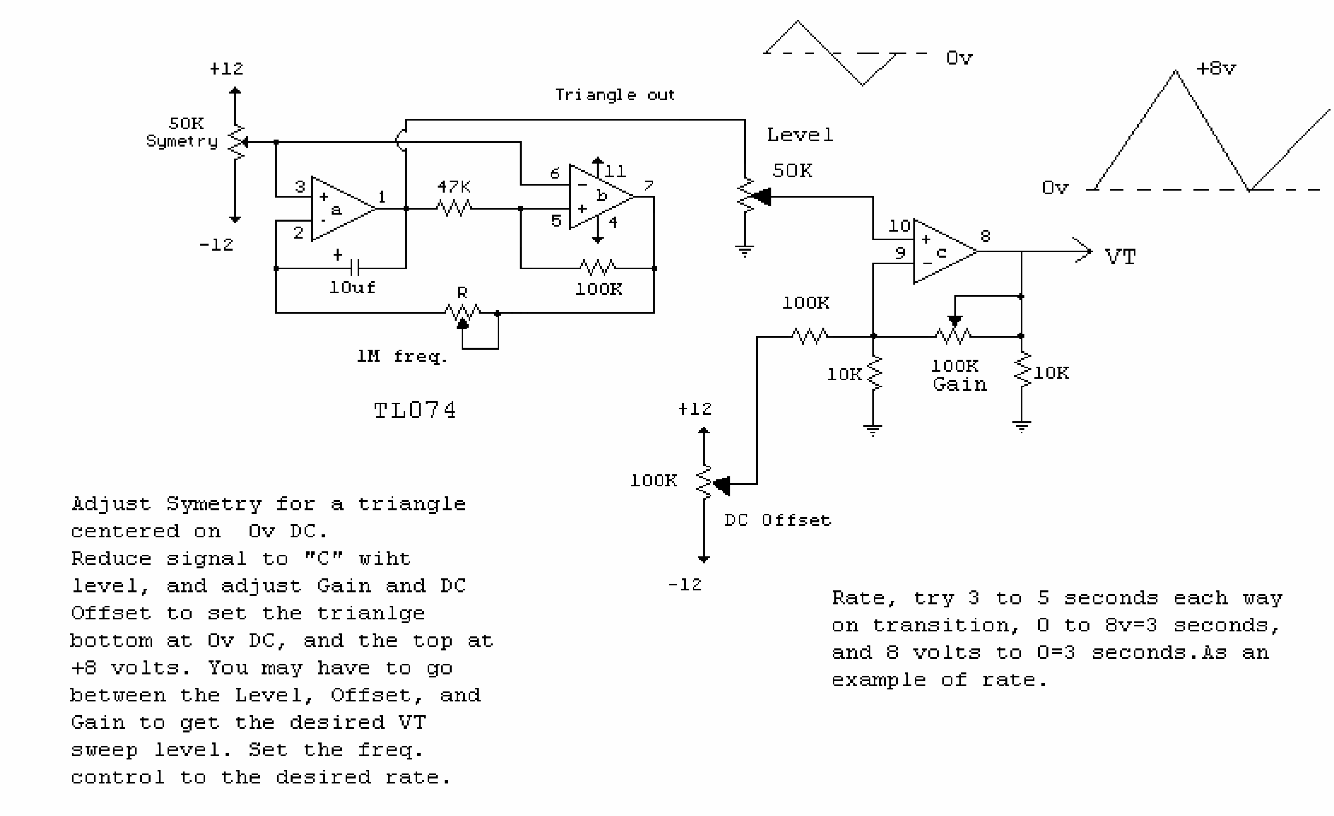
The random voltage random voltage generator (RVG) amp is then rectified by D1 to produce random pulses of varying amplitude. The pulses are averaged by another low-pass filter of VR3, VR4, C7, and C8. The output of this filter is again amplified and limited by the 8.2-volt zener diode to produce the VT. VT is also sent to another buffer stage to drive a panel meter that allows the user to adjust the tuning rate via the board-mount trimmers. The meter gives a visual indication of RVG operation. VT, by definition is a randomly varying DC voltage that changes from close to zero volts to 8.2 volts—the limit set by the zener diode. If the VT goes beyond 8 volts it can cause the tuner to try to tune out of band, which causes a loss of usable audio from the tuner. There will be occasional pulses from the white noise that are higher than average, and will momentarily drive the VT high, causing the tuner to stick on the high end of the tuning range. This is normal, and difficult to completely eliminate. The gains have to be "played with" to get the VT to be in the range the tuner is designed for without staying too low or jumping too high for periods of more than few seconds. You have to go between the white-noise gain, and RVG-gain while watching the VT on a scope.



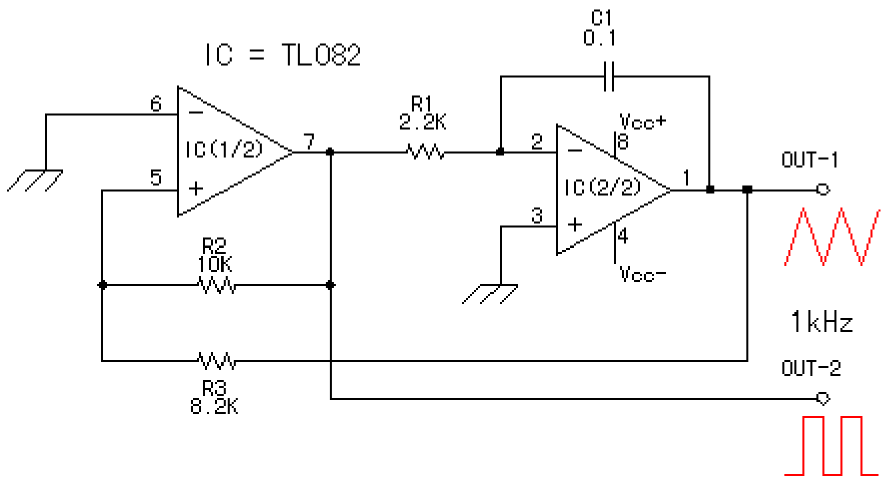
This is the white noise signal at the emitter of Q1. The scope vertical range is .01 volt/cm using a Radio Shack or generic 2N2222 transistor. High quality transistors produce much less noise—usually less than .01 V p-p, or 10 mv peak to peak. Radio Shack transistors are not low-quality devices, but they do seem to work much better for the production of white noise. You still have to select a transistor that has the best low-frequency component as seen at the anode of the rectifier, D1, and has the best DC offset out of the first white noise amplifier. If the low frequencies are not high enough in amplitude, the result is mostly noise from the op amp itself at the rectifier, D1, and if you turn up the gain to get more signal, the stage will go into low-frequency oscillation. So if there is no VT signal, or VT tends lock up high, replace the transistor first.

As of March 2007, it has become apparent that my assumptions about the tuning needing to be random was in error. It seems that linear tuning, and even tuning a radio across the AM or FM band by hand is just as effective, if not more so, in receiving communications from otherworldly beings, these being spirits, and other entities, such as some that claim, or seem to be non-human in origin. I am adding a linear sweep mode to my system, which still allows for the method to be automated, and recorded easier. The hand method does not even require an echo box, you can record directly to a tape deck, or DVR from the radio's speaker, which can also be done with the "ghost box" older versions.

Instead of the Random Voltage Generator, this circuit can be used to generate the linear sweep, VT signal. Early results show this just as effective as the random versions.



Running the triangle wave at such a low frequency requires going between the gain and level, and symmetry controls to get the duration, DC level, and amplitude of the sweep right, depending on the tuner being used.

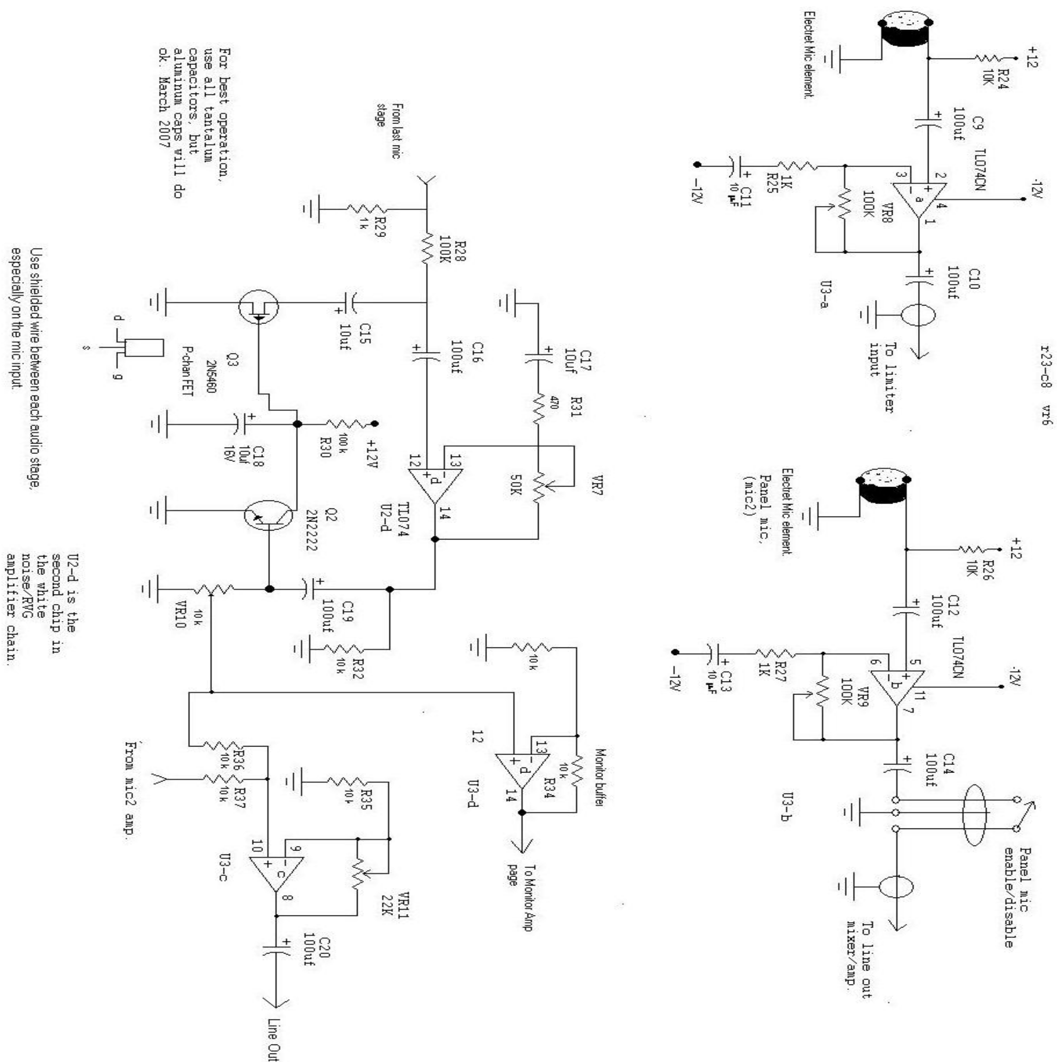


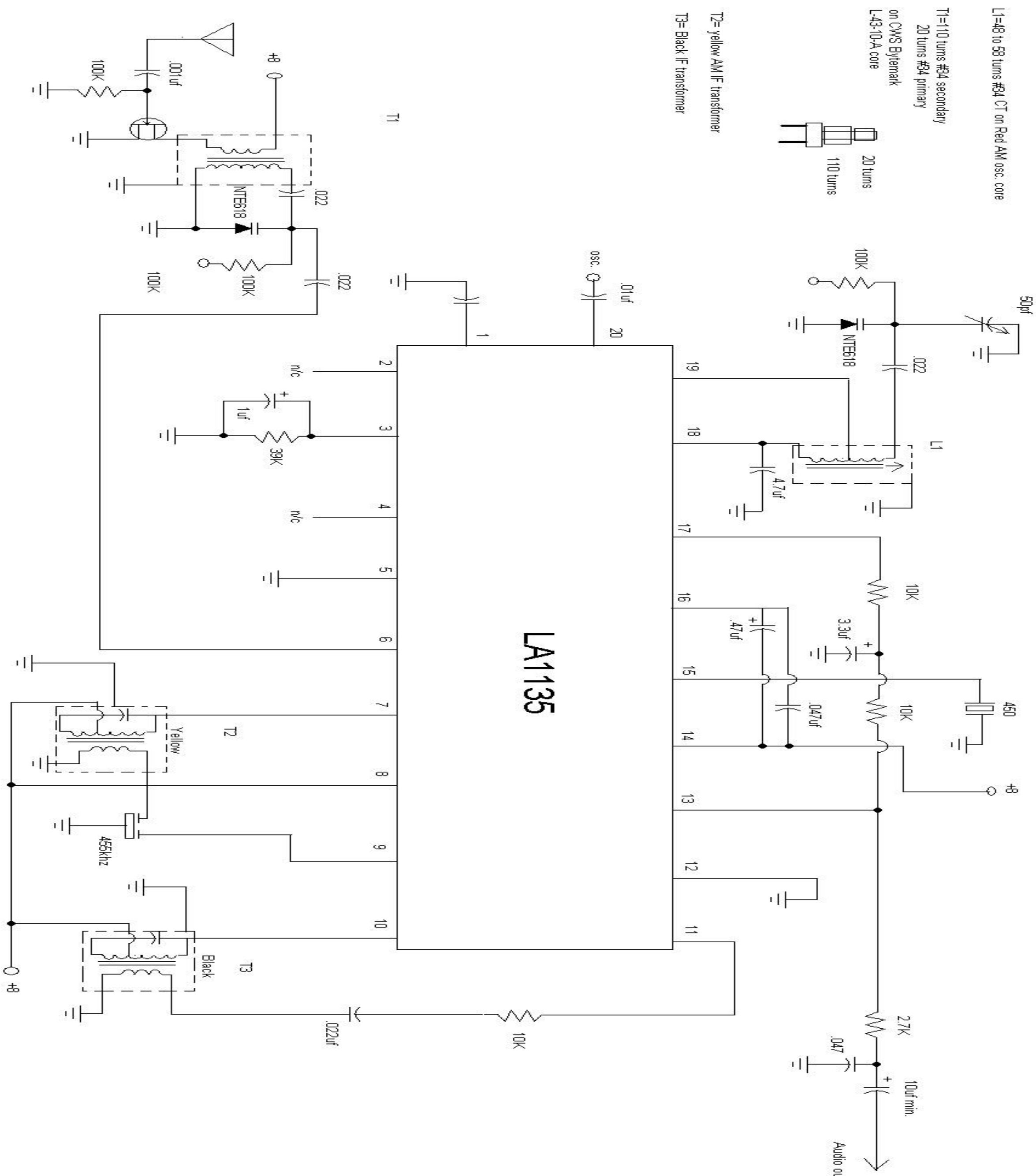
Another example of a triangle wave generator found on the web.

Mic Amplifier

The audio from the tuner is supplied to the echo chamber via a small speaker. Opposite the speaker is mounted an electret microphone element. The echo chamber audio is picked up and amplified by mic channel one of the mic amp circuit. Mic 2 is a panel mounted electret mic to be used if the operator wants questions or comments to come out on the recorder. This panel mic output does not come out in the monitor speaker to help prevent feedback, but is routed to the recorder via the line output jack.

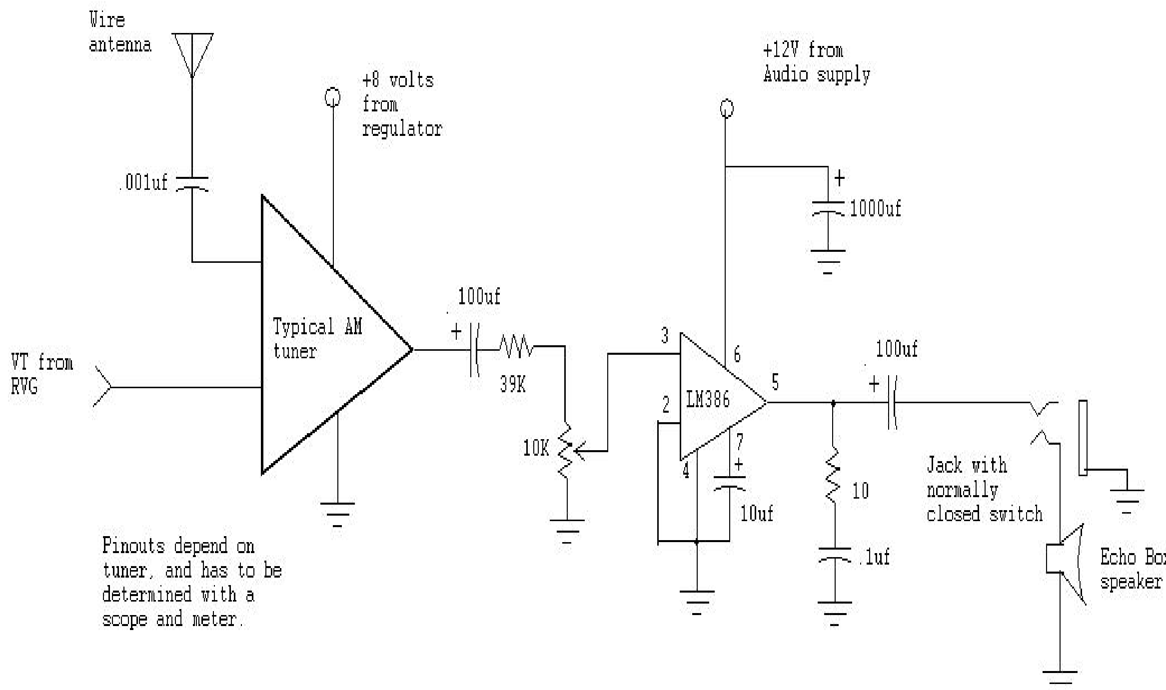
All audio amplifiers are just the basic LM386 amplifier in a standard configuration.



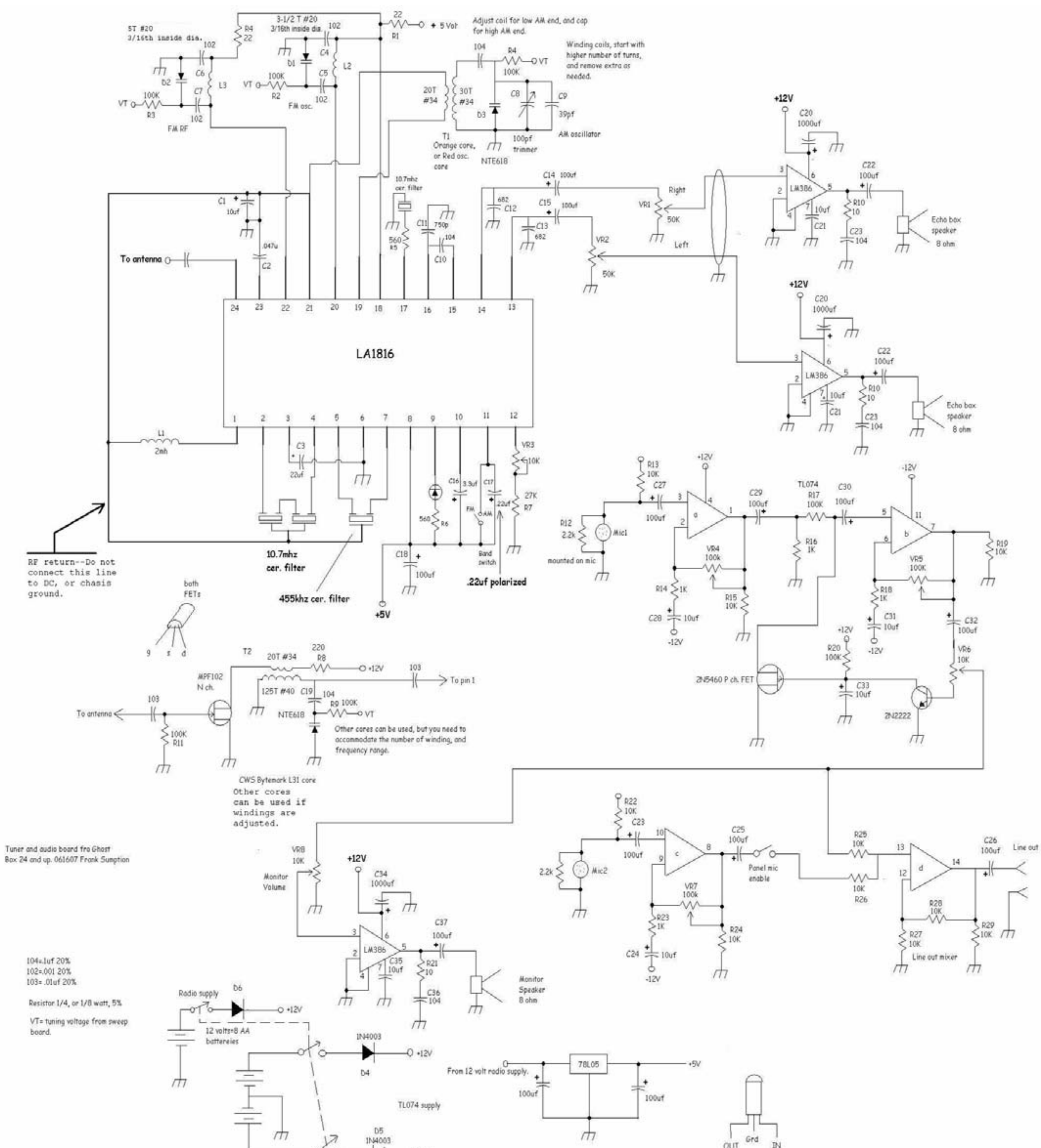


A tuner based on the LA1135 chip

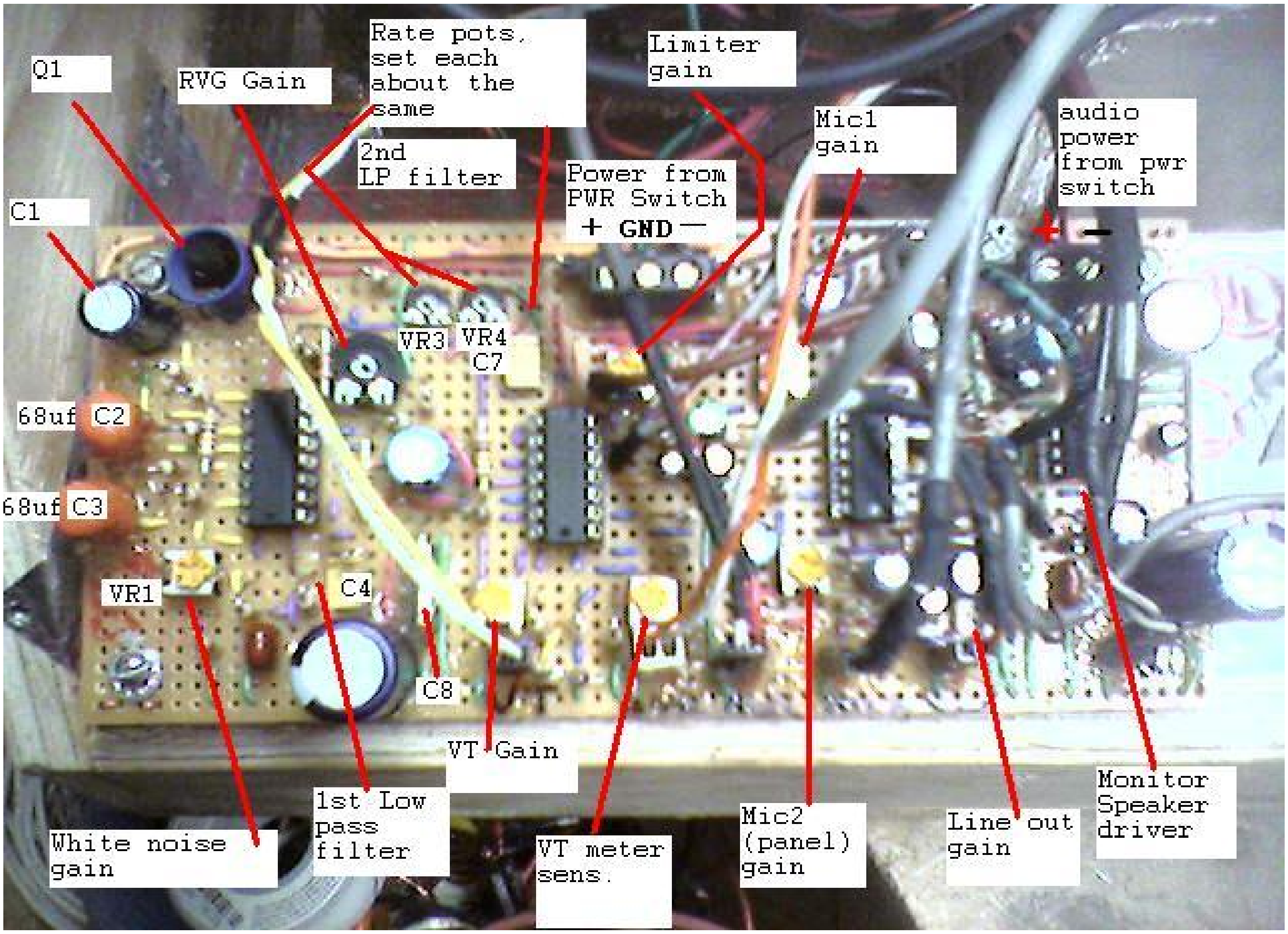
Typical tuner amp—whether it's a tuner module, or an on board "homebrew" tuner.



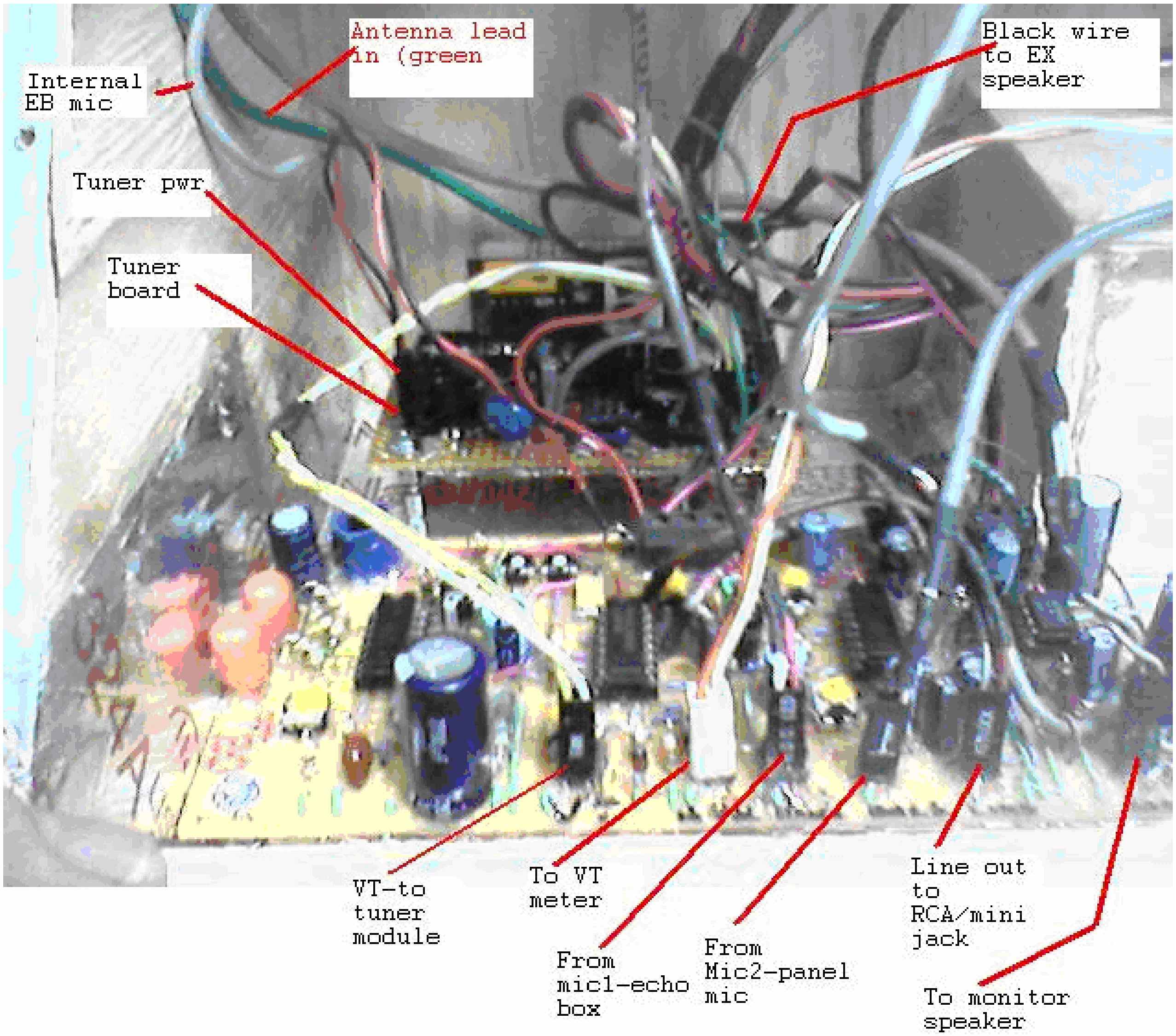
A tuner based on the LA1816 chip



Box 20 main board adjustments



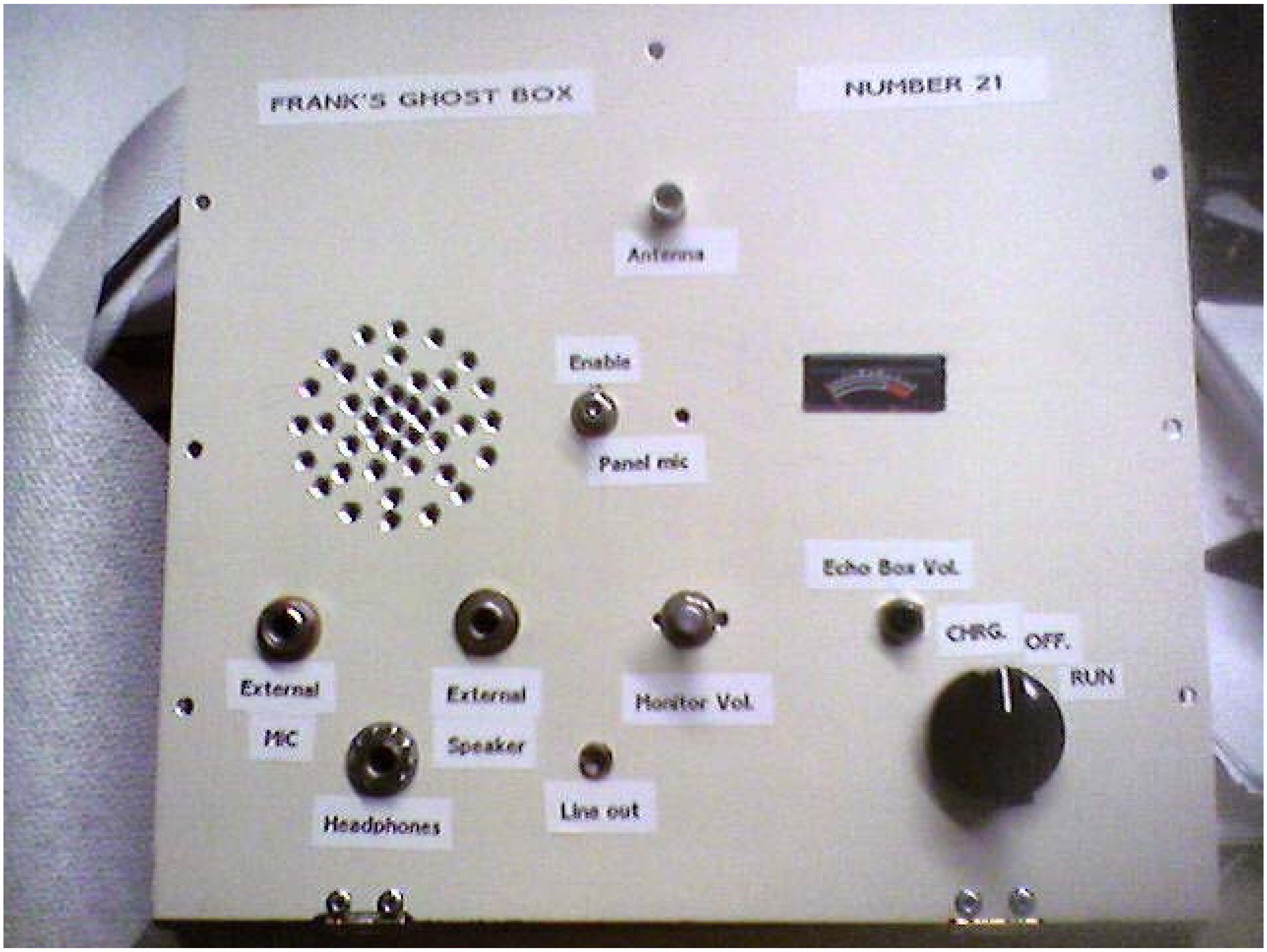
Box 20 wire connections

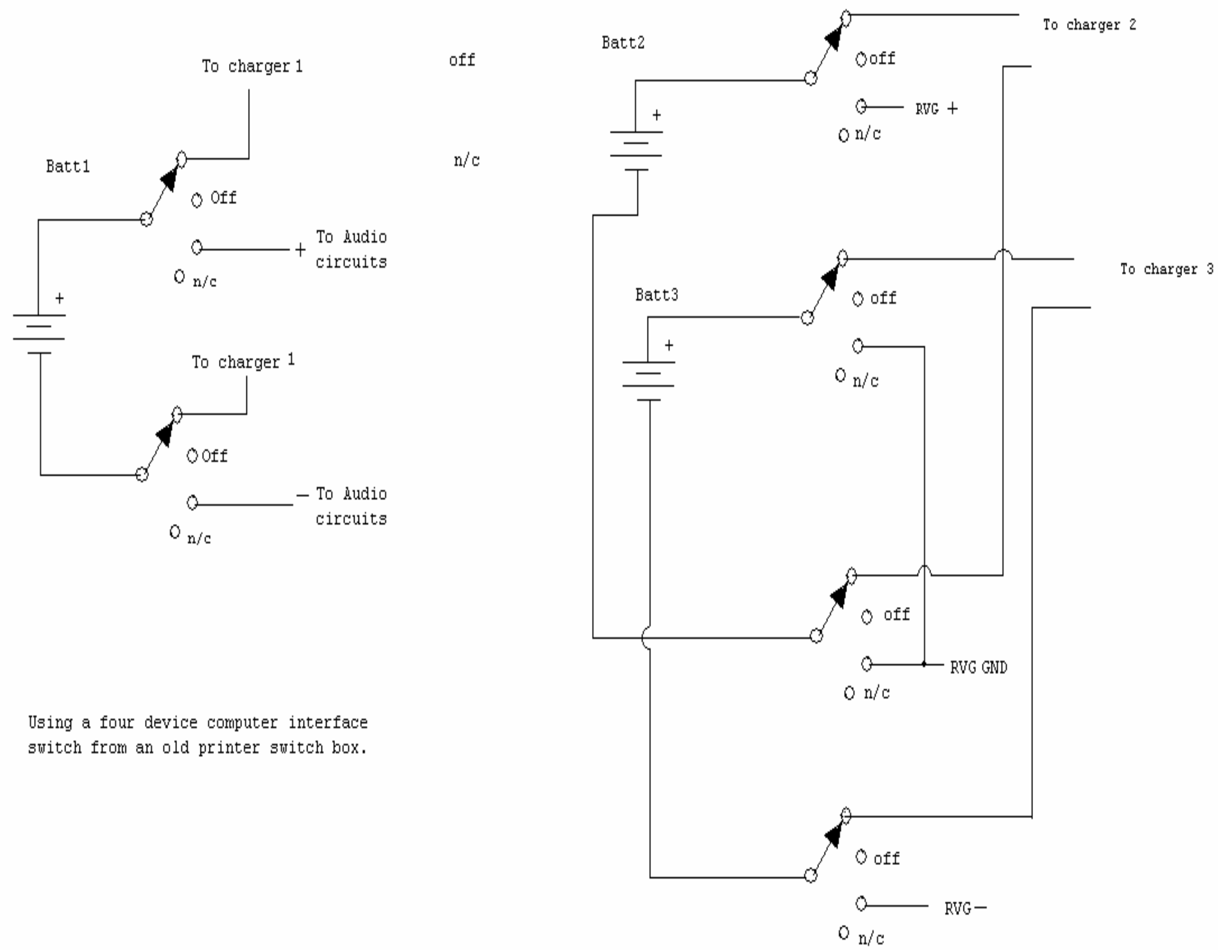


Internal EB mic
Antenna lead in (green
Black wire to EX speaker
Tuner pwr
Tuner board
VT-to tuner module
To VT meter
From mic1-echo box
From Mic2-panel mic
Line out to RCA/mini jack
To monitor speaker

Number 20, finished. Note the holes, and the raised front panel. This reduces feedback between the echo box mic, and the monitor speaker.

Number 21—almost identical to 20. I hinged the front panel, but it also stands off the cabinet by about ½ inch. One difference is the use of Gel Cell rechargeable batteries.

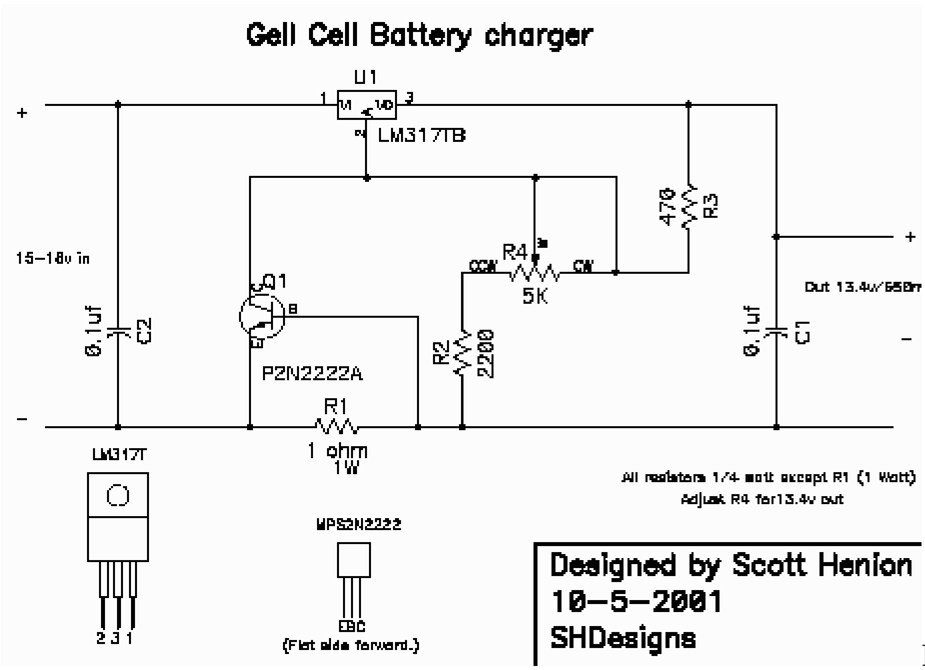

FRANK'S GHOST BOX
NUMBER 21
Antenna
Enable
Panel mic
Echo Box Vol.
CHRG.
OFF.
RUN
External
MIC
External
Speaker
Monitor Vol.
Headphones
Line out



The Charge-Off-Run switch

This is the charger circuit I used for Number 22, as you can see, not designed by me! I included this not to be used in production, just to show that often I go out on the web for circuits, and ideas.

Gell-Cell Charge Circuit



Revised 5-7-2005: Added LED and notes to schematic.

The above schematic can be viewed in Adobe PDF here: gcellchg.pdf (right-click on link and select "save link as" to save.)

The above circuit will charge any 12v Gell Cell. Maximum current is about 650 milliamps. This charger will not overcharge a gell cell. In fact, it can be left on indefinately. This is an improved version of the float charge method described by Panasonic: http://www.panasonic.com/industrial/battery/oem/chem/seal/index.html

Power can be from any 15-18v supply. I use an old 12v/1A wall transformer (outputs about 17v with no load.)

How it works:

This circuit controls both the current and the charge voltage. U1 along with resistors R2, R3 and R4 generate a 13.4v output. This is the voltage specified by gell cell manufacturers as a "constant charge voltage." At 13.4v the batt will never overcharge. Some batteries specify 13.6 to 14.7 volts, but testing has shown that many batts will leak if float charging at this voltage *. U1 can only carry up to 1.5 amps and is limited by its heat dissipation. Q1 and R1 limit the current to about 0.65 amps. This limits the current to protect U1 and the battery from over current.

* Panasonic batteries may be able to withstand this voltage. My work with UPS designs has had terminals of several brands corrode off of batteries if the voltage was set higher than 13.4v.

Notes:

- Input voltage can be from 15-20v.
- Q1 can be any general-purpose NPN transistor.
- All resistors are 1/4 watt except for R1, which is 1/2W or greater.
- C1/2 are any 0.1uf capacitors.

A 7Ah Gel Cell will be close to fully charged in a few hours after a normal days use. Leaving the battery on the charger will NOT overcharge it. In fact it will maintain a battery forever.

Assembly:

The entire circuit can be constructed on a small perf board 1" square or so. U1 (LM317) must have a heat sink; a small piece of aluminum will do. There are many heat sinks available. The size of the heat sink depends on the input voltage. Note: the case of U1 is connected to pin 3, so the heatsink must be isolated from any other parts of the circuit. An insulator (TO-220 type) can be used to isolate the case from the heatsink if needed (i.e. bolting U1 to the case as a heatsink.) U1 should not get too hot to touch.

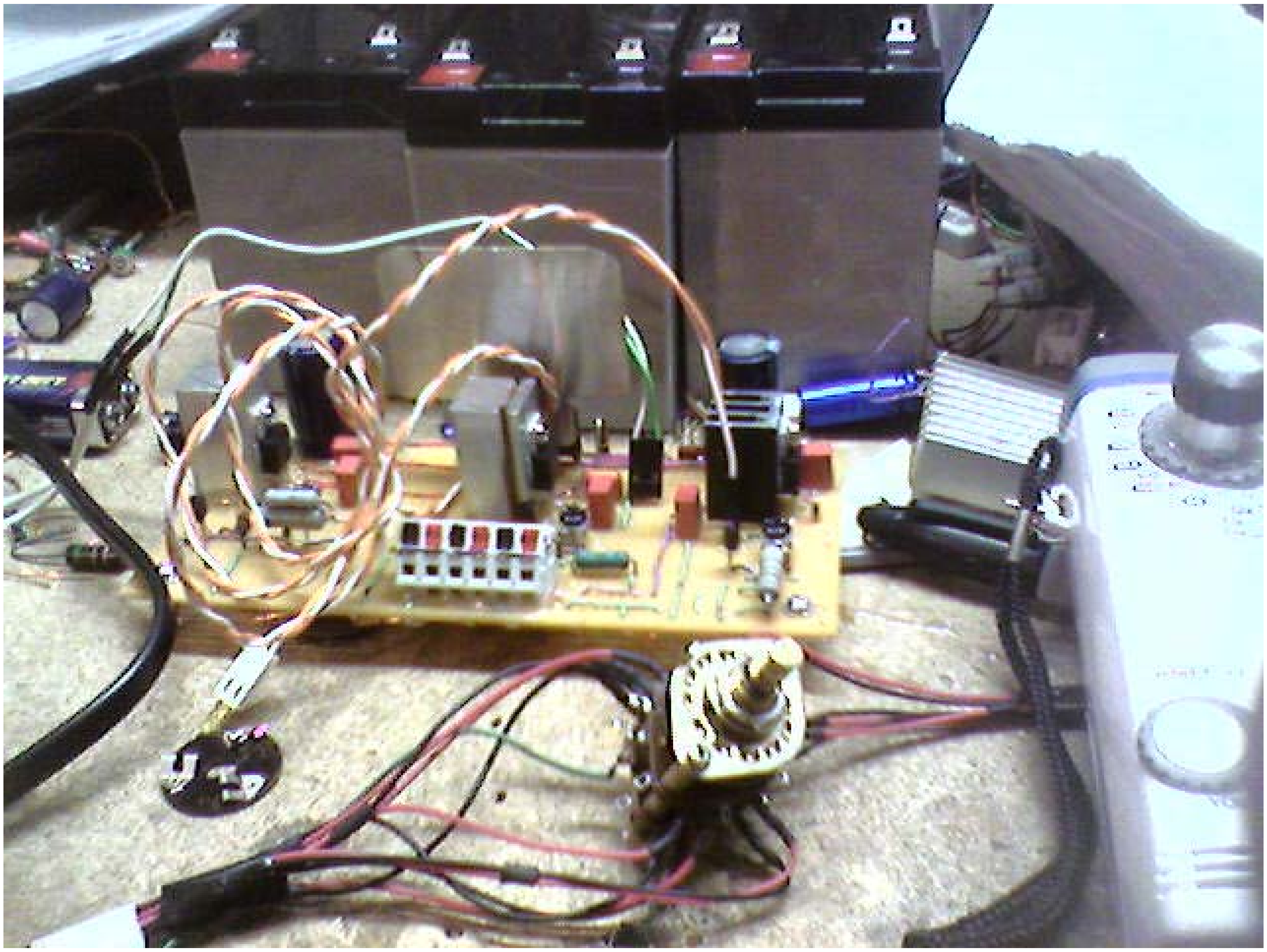
Adjust R4 for 13.4 to 13.5 volts out with no load.

Parts (Radio Shack part numbers given.):

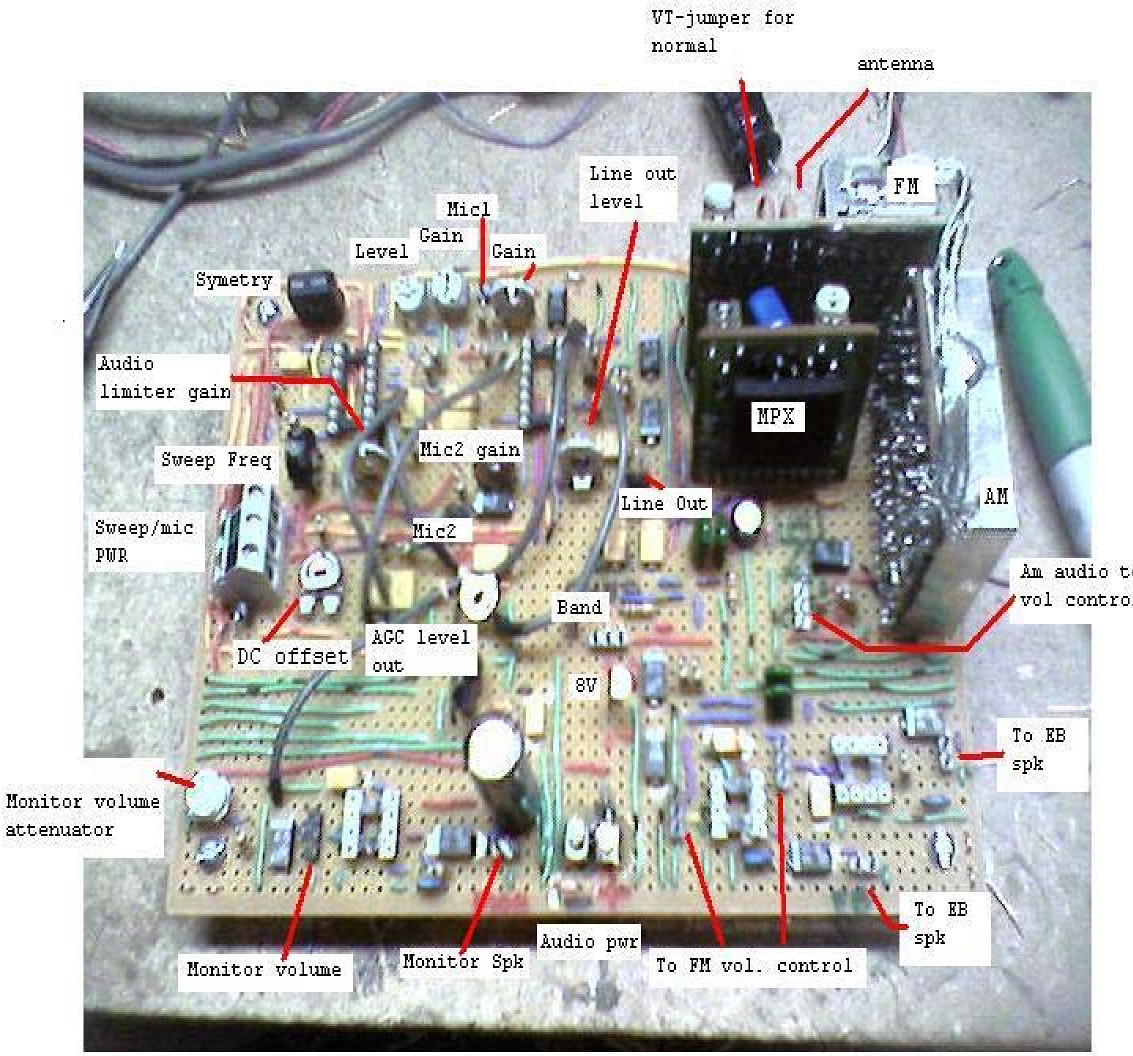
	Description	RS part #
U1	LM317T adj. regulator	276-1778
Q1	2N2222A NPN trans.	276-2009
R1	1 ohm/ 1/2 watt resistor (note 1)	271-131
R2	2200 ohm 1/4 w, 5% res	271-1325
R3	470 ohm 1/4 watt, 5% res	271-1317
R4	4.7K trim Pot	271-281
C1,2	0.1uf/5ov ceramic cap	272-135
	Heat Sink	276-1368
	Mounting hardware (note 2)	276-1373

Notes:

1. RS part is 10 watt, only size they carry in 1 ohm.
2. Required if heatsink is isolated.
3. The current limit can be changed as needed. Current is set by: I=0.65/R1 R1 must be able to dissipate at lest 0.423/R1 watts.
4. The time to charge will be sped up by setting a higher voltage. 13.6 is usually fine. 13.4 was chosen to allow infinite charge time.

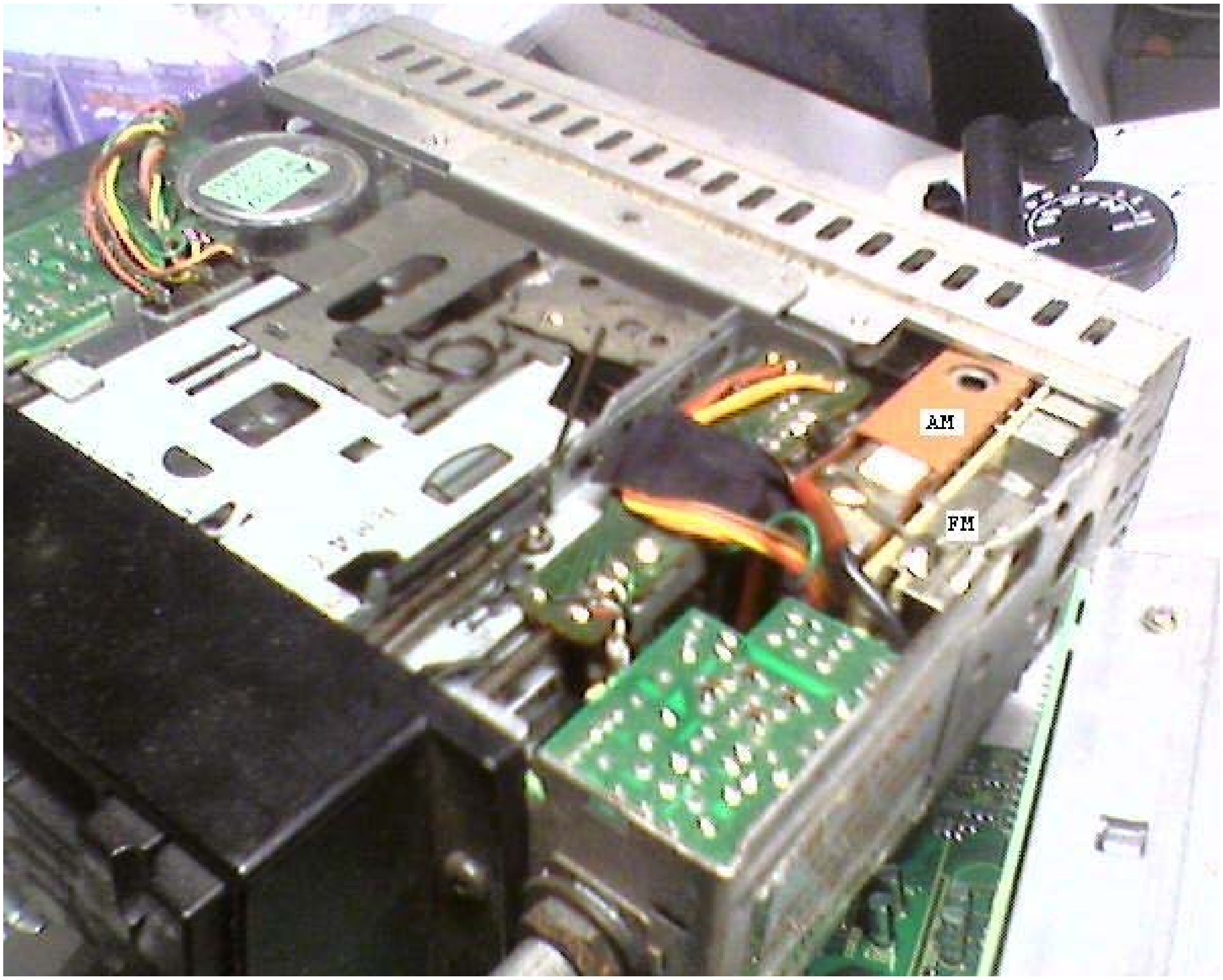


The Gel Cell batteries, charger board, and Charge-Off-Run switch. On the far right is a pocket radio used for manual sweep recording. Note the knob glued to the top of the tuning knob to make sweep tuning easier. Sweep tuning is manually turning the tuning knob up and down the band, either AM, or FM while listening, and/or recording for coherent, meaningful messages assembled out of the audio as the dial sweeps the band. You can get direct voice in this manor. As one can imagine, this would be prime debunker fodder!



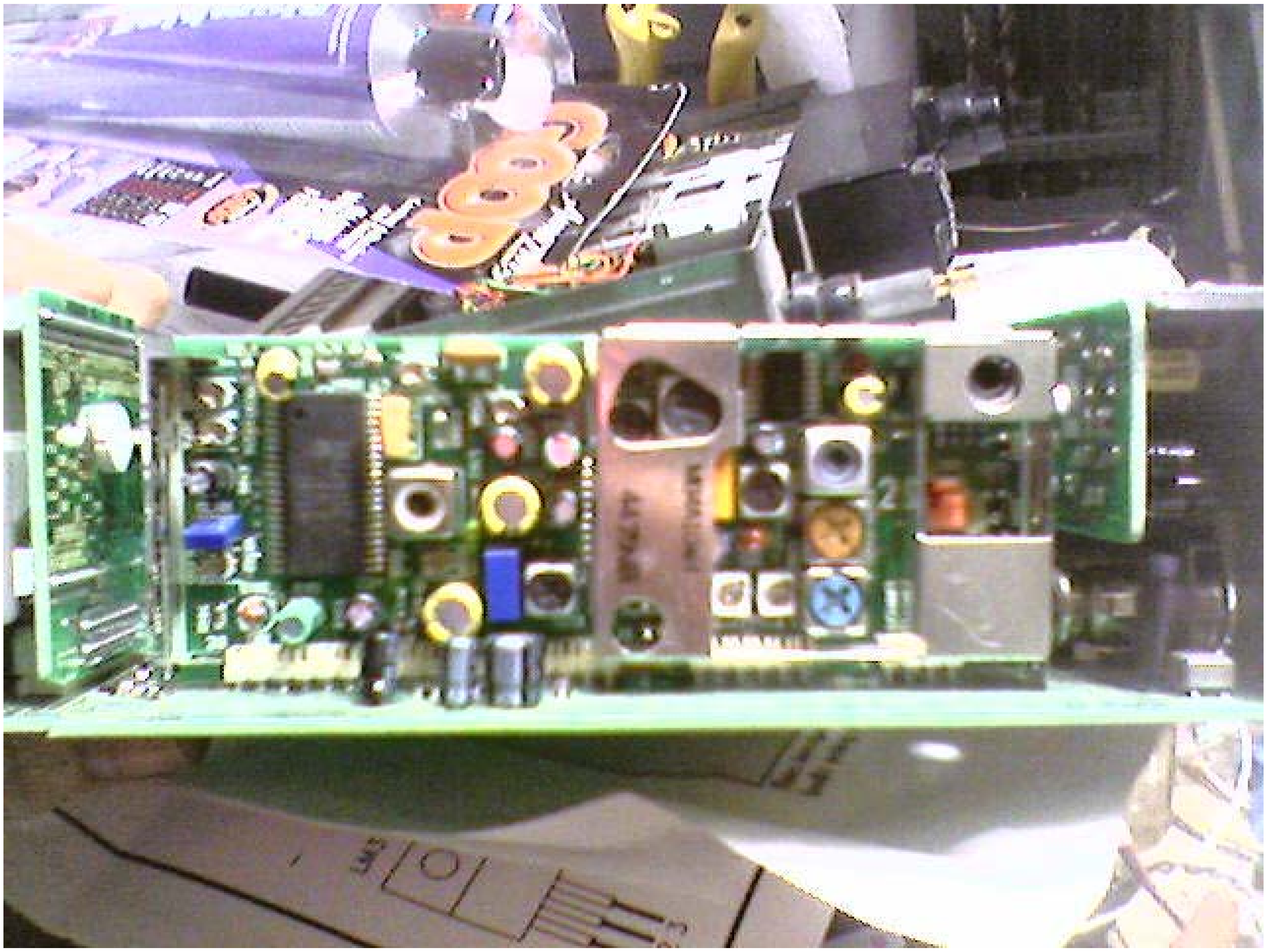
I wanted to test the linear sweep mode on a real "box", hence this, Number 23. Assembled in one night on a whim, April 7th-8th 2007. I often do "all nighters" on this stuff. Using an AM/FM tuner from a car stereo. This tuner uses a separate MPX board, which separates the left and right audio channels. Not shown is a "on edge" buffer board I had to add because the audio amplifiers were loading the tuner audio done to nothing out of the volume controls. I suspect part of the problem is my switching arrangement so I can use a single dual control for AM and FM.

Typical car stereo tuner.

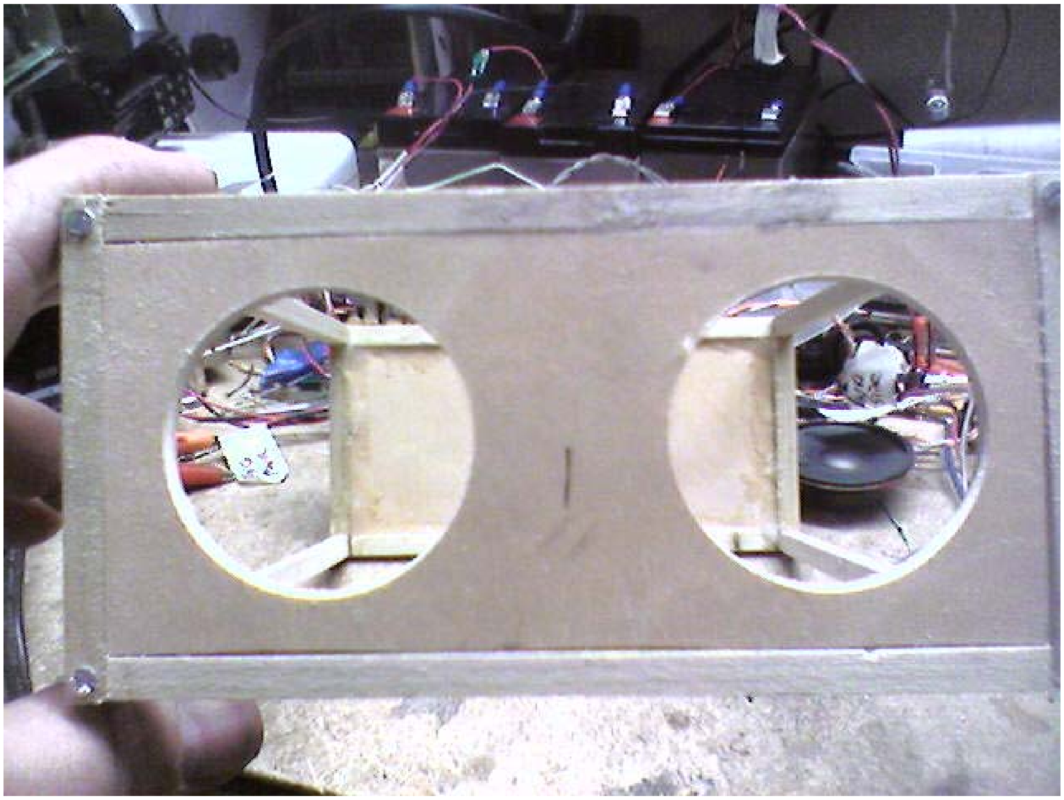


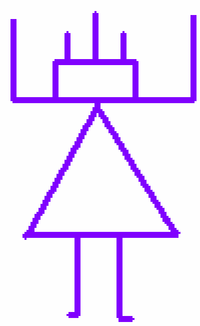
This tuner is now on the #22 board. As of 5/21/07.

A newer AM/FM tuner. Some of these are not usable because the VT signal for AM is 4 volts, and 8 volts for FM, or they use the IC-squared serial bus for digital tuning. On this particular board the tuner pin out is labeled on the underside, so you would not have to power up the tuner to ID the pins.



Echo Box construction, using 1/8 plywood ends, and ¼ wood for frame.





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