

10 METROS FM AMPLIFICADOR

5-10 vatios de entrada / 90 - 110 Watts fuera

por

W4NFR

En los años 80, construí un amplificador de transistores de una sola etapa para potenciar mi señal FM a 10 metros.

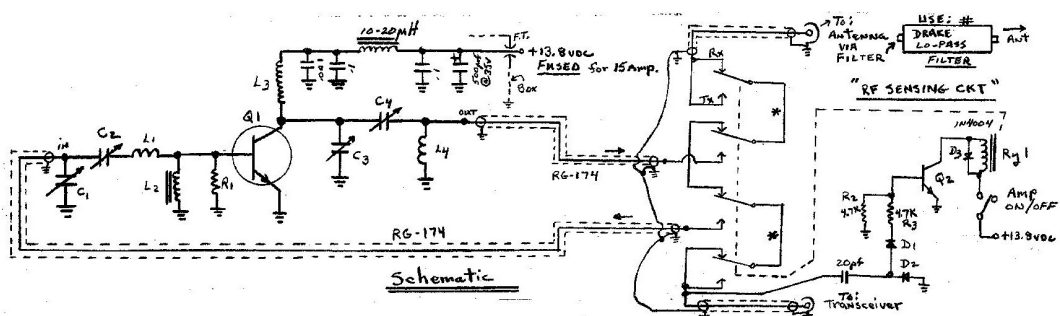
Tras convertir una placa CB de HyGain para transmitir y recibir FM en 10 Necesito más potencia de Tx. A continuación se muestra la disposición de la placa y el esquema de este amplificador. También fotos del amplificador terminado.

La potencia real de entrada es de unos 10 vatios y la salida de 110 vatios.

ESQUEMA

Smoker Continued.....

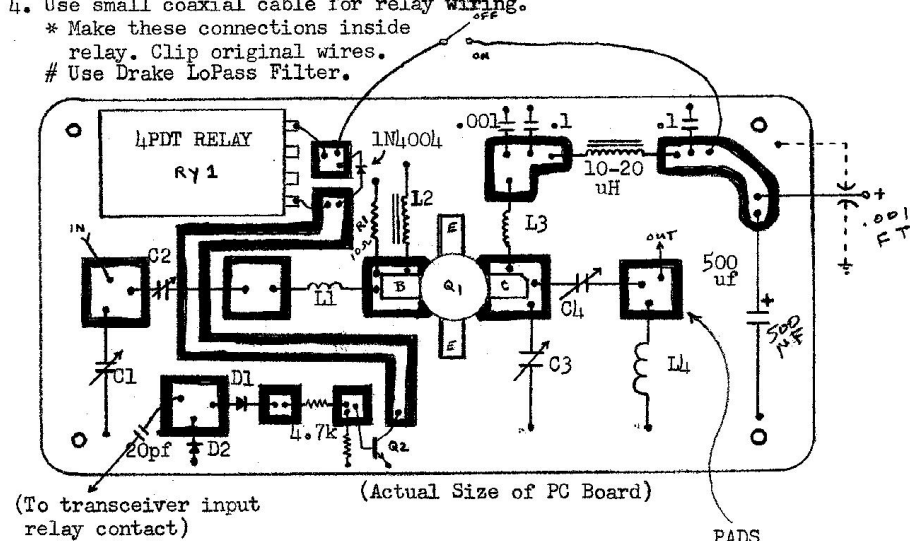
1. Wire up amplifier as shown below....
2. Connect a wattmeter or vswr bridge between the output of LoPass filter and Antenna feedline.
A. Tune C1, C2, C3 and C4 for max out. Make sure the swr is low and antenna is resonant.
3. Check to make sure the heatsink does not get too hot. It should get warm after 2-3 minutes but not hot. A good sign that heat is being dissipated is.....Watch the power output and if it holds steady after long keydown....ok.



"ADD SOME SMOKE TO THE CONVERTED LOMETER FM RIG" -W4NFR
(5 watts input = 90 watts output) 12dB Gain @ 50% eff.

Package Details:

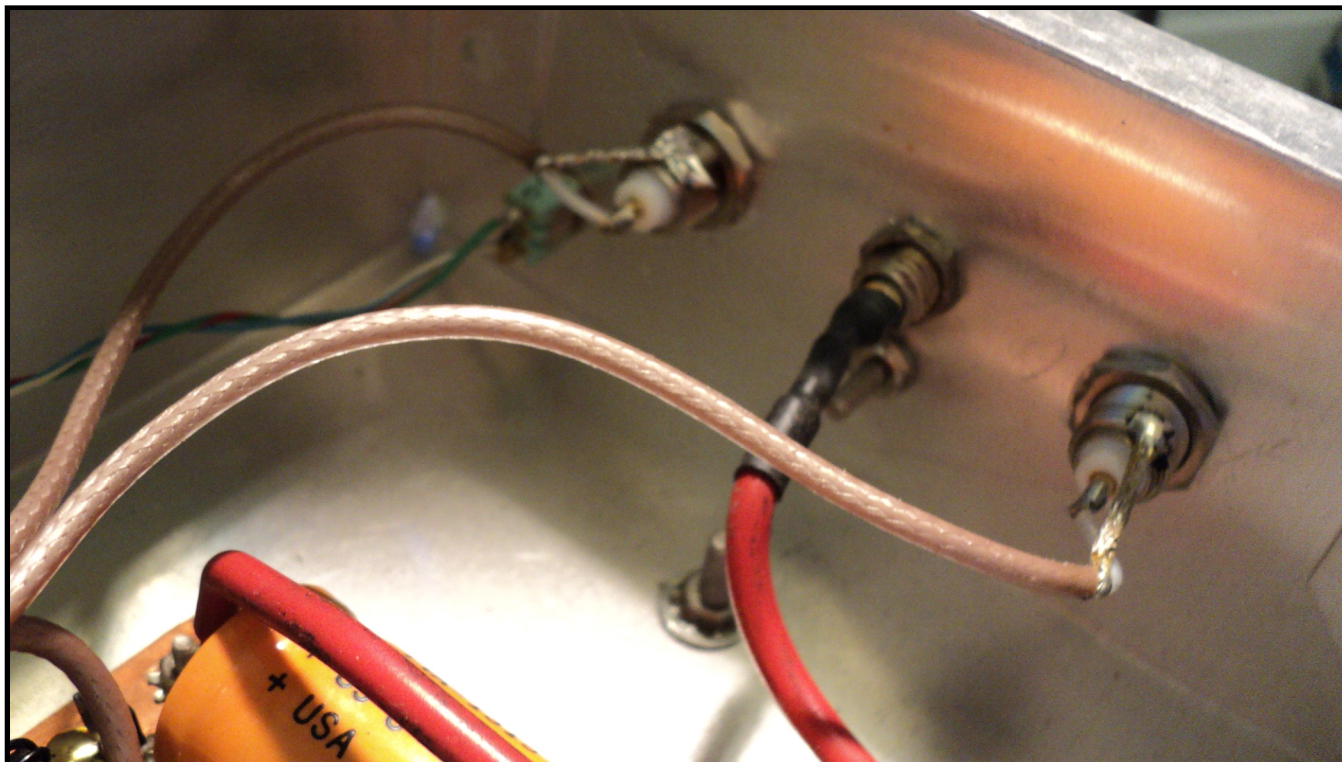
1. Mount Amplifier board inside metal 4" x 8" x 2" Box (Use spacers when mounting to avoid any strain on Q1)
2. Use 4" x 8" Heatsink mounted on top of box.
3. Secure Q1 stud to heatsink.
4. Use small coaxial cable for relay wiring.
* Make these connections inside relay. Clip original wires.
Use Drake LoPass Filter.



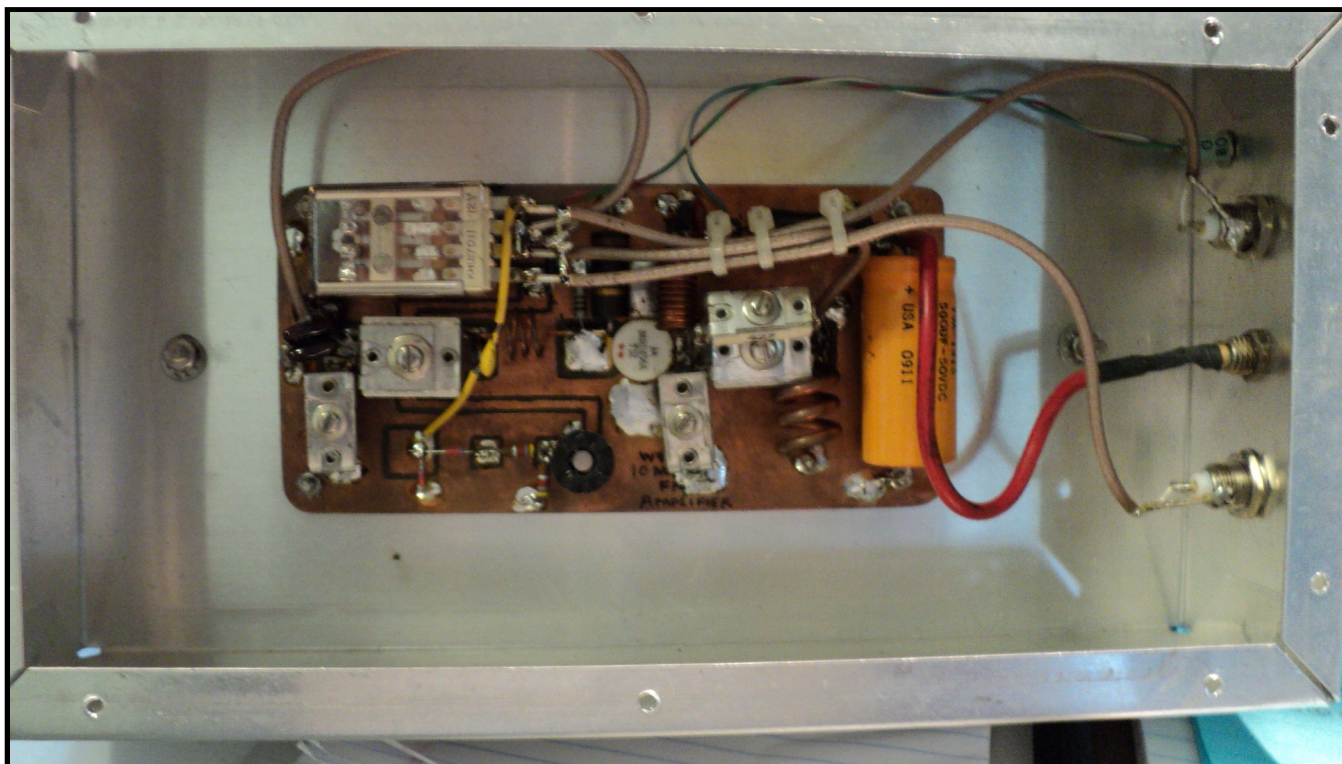
Parts List: (1) 5 1/2" x 2-5/8" Single Sided PC Board- Grind out with Dremmel Tool.

- Q1 MRF454A NPN Power transistor.
- Q2 2N2222 NPN
- RY1 4PDT Relay, 12vdc coil. (Radio Shack)
- C1 Arco capacitor 170-780pf #469
- C2 " " " "
- C3 Arco capacitor 37-250pf #426
- C4 Arco capacitor 390-1400pf #4615
- L1 3t. #18, 5/16" id, 5/16" long.
- L2 10uH molded rf choke. (Radio Shack)
- L3 12t. #18 awg enamel wire, 1/4" id. closewound.
- L4 3t. #10 solid copper wire, 3/8" id, 3/4" long.
- Misc:** 2 4.7k resistors
- 2 1N 914 diodes
- 1 1N4004 diode
- 1 20pf cap disc
- 2 .1 uf cap
- 1 .001uf cap disc
- 1 500uf elect cap @35vdc.
- 1 .001 feedthru cap
- 1 10-20uH choke (not critical)
- 1 SPST on/off switch
- 2 chassis type rf connectors (BNC or SO-239)
- 1 10Watt

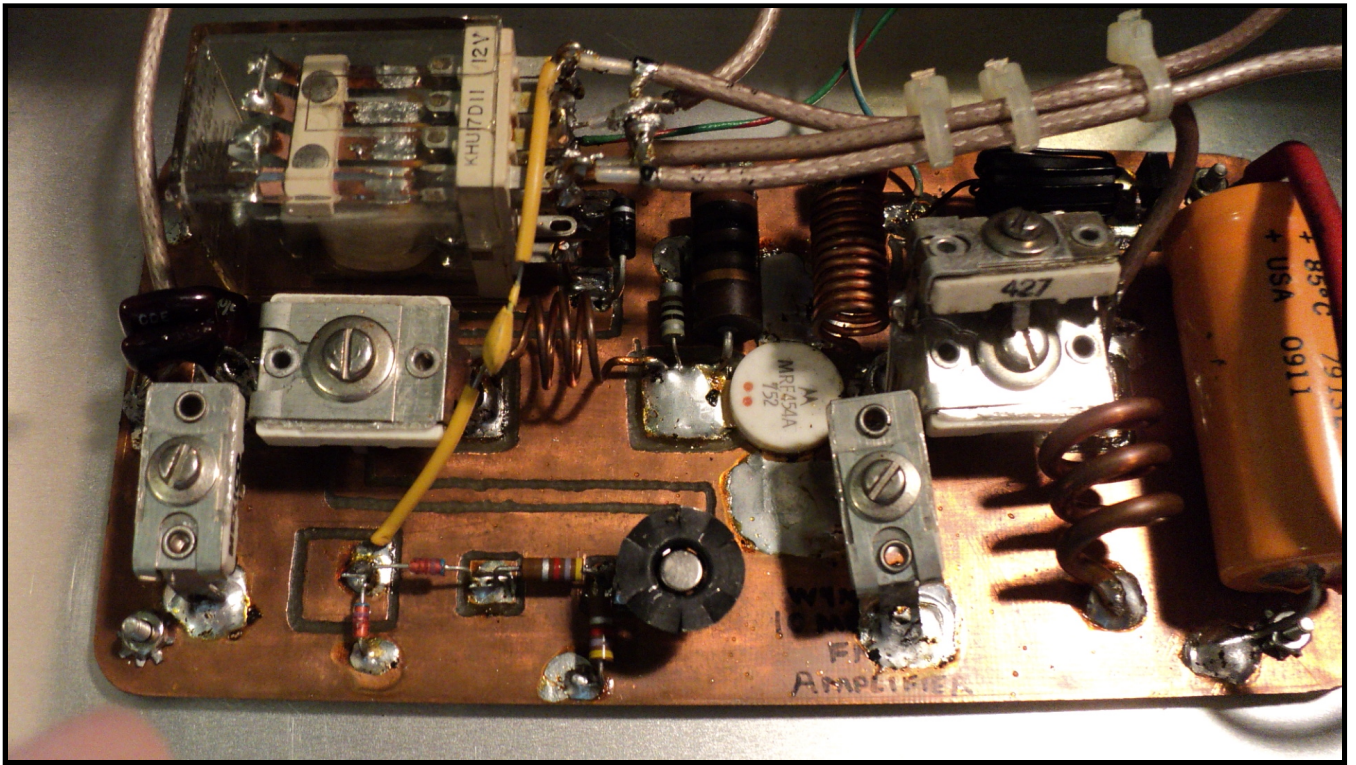
Amp A



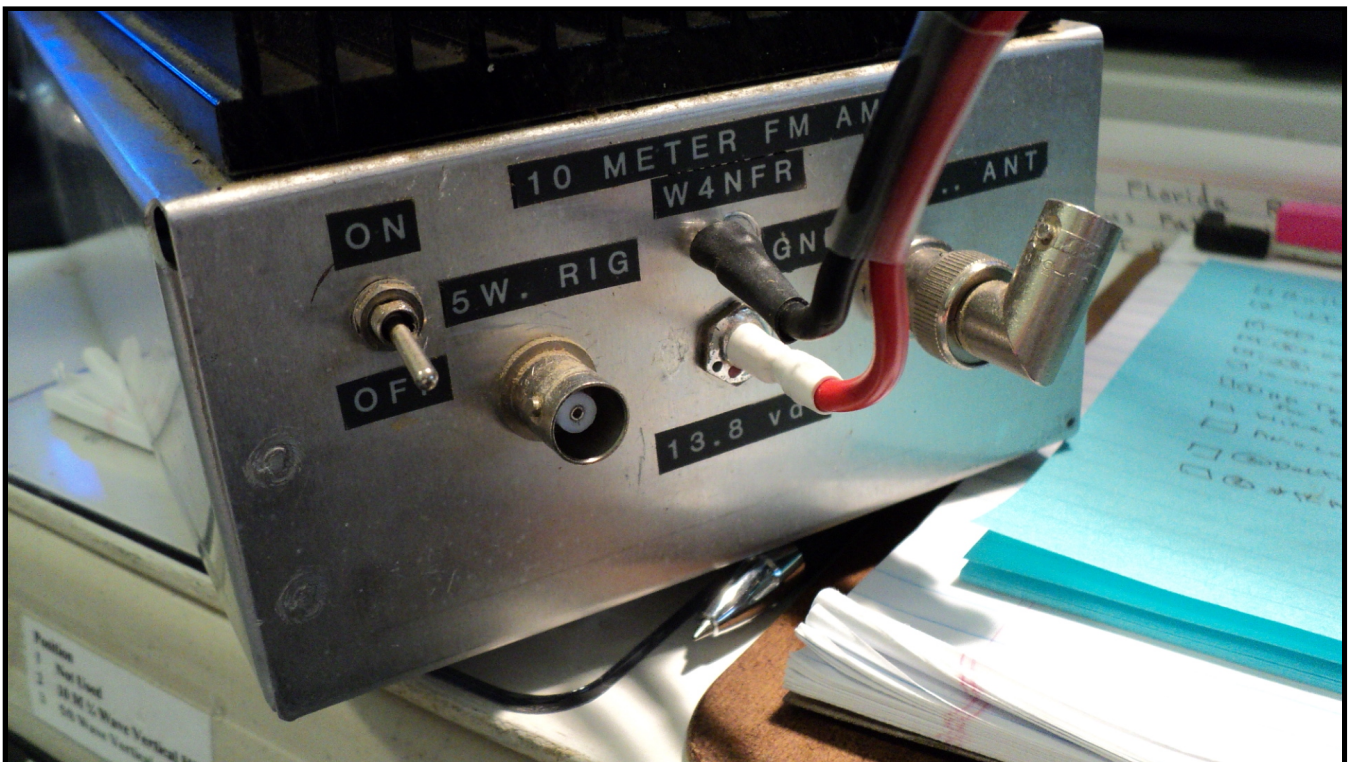
+12 VDC MONTADA EN SU INTERIOR FOTO



GENERAL DEL



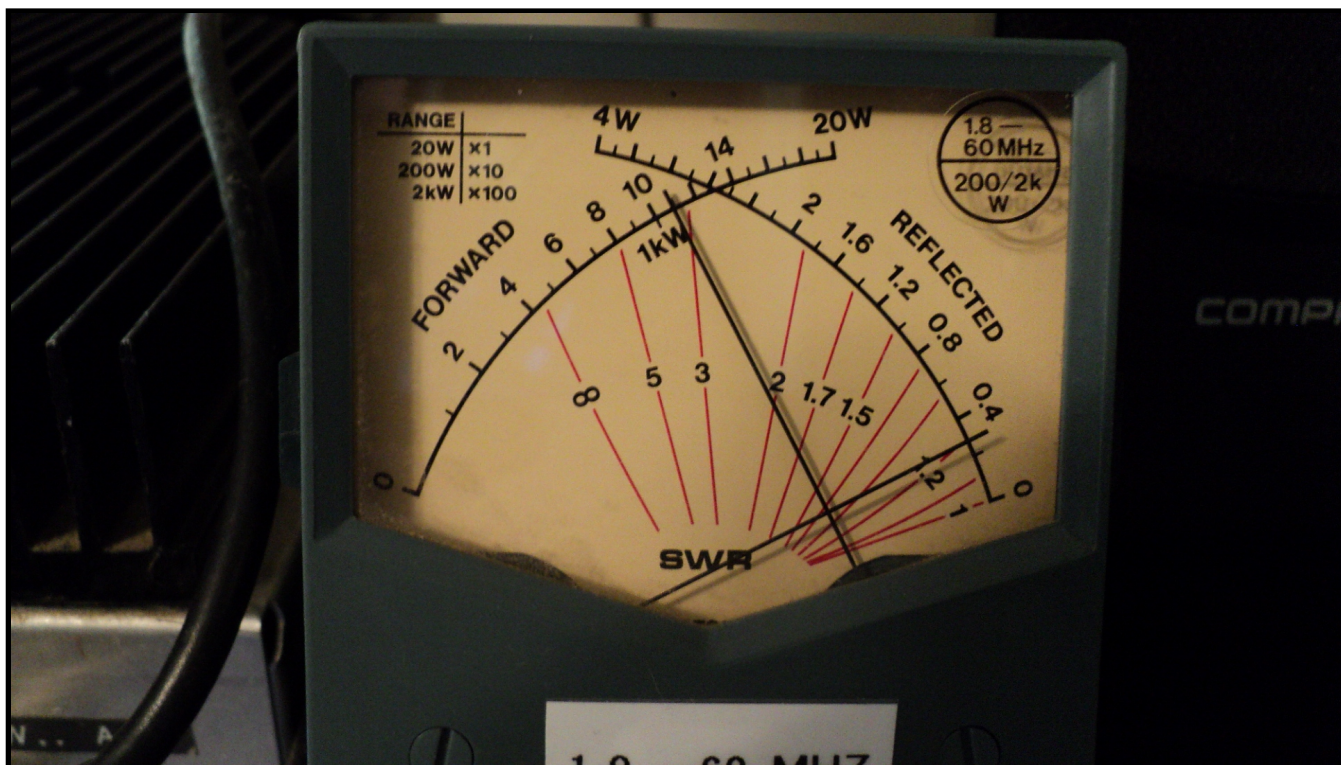
CHASIS VISTA FRONTAL



DISIPADOR



LA MEDICIÓN SWR EN LA ANTENA



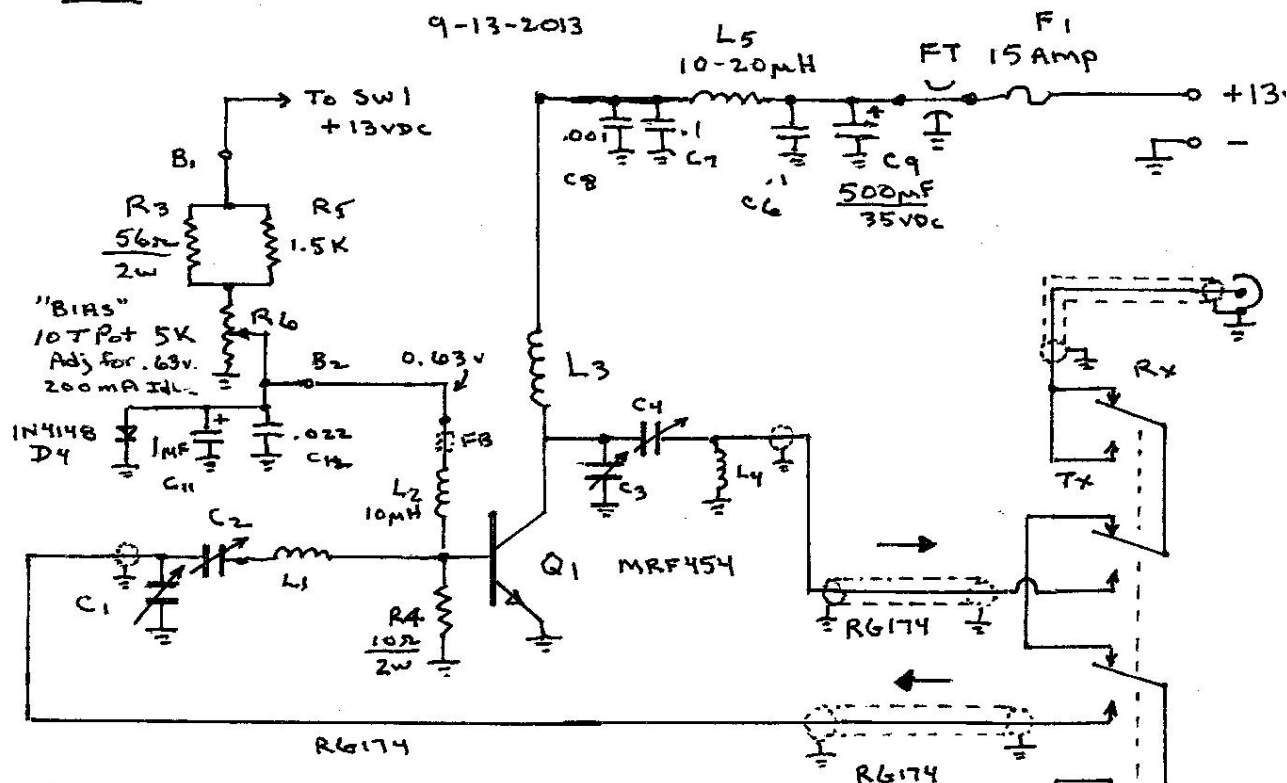
MODIFICADA A-99 **ESTA ES LA EDICIÓN REVISADA DEL AMPLIFIER**
por
W4NFR
13-09-2013

Revised
For SSB

10 METER AMP, 5W-10IN = 90W out

W4NFR

9-13-2013



Parts List

Q1 MRF454A or MRF454

Q2 2N2222 NPN

RY1 4PDT Relay, 12VDC coil

C1 ARCO Cap 170-780pF #469

C2 " " " "

C3 ARCO Cap 37-350 #426

C4 " " 390-1400pF #4615

L1 3T #18, 5/16" ID, 5/16" Long

L2 10μH molded RF choke

L3 12T #18AWG enamel wire
1/4" ID close wound.

L4 3T #10 solid copper wire
3/8" ID, 3/4" Long.

R1, R2 = 4.7K

R3 = 56Ω 2W.

R4 = 10Ω, 2W.

R5 = 1.5K 1/2W

R6 = 5K Pot 10T

D1, D2 = 1N914

D3 = 1N4004

D4 = 1N4148

C11 = 1μF elect.

C5 = 20pF cap Disc.

C12 = .022

C6, C7 = 0.1μF cap.

C8 = .001μF cap.

C9 = 500μF elect cap

C10 = .001 Feed Thru cap

L5 = 10-20μH CHOKe

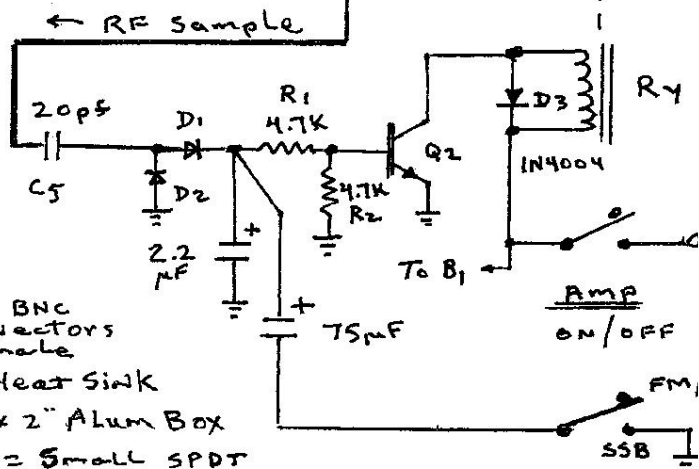
MISC

(2) chassis BNC
RF connectors
Female

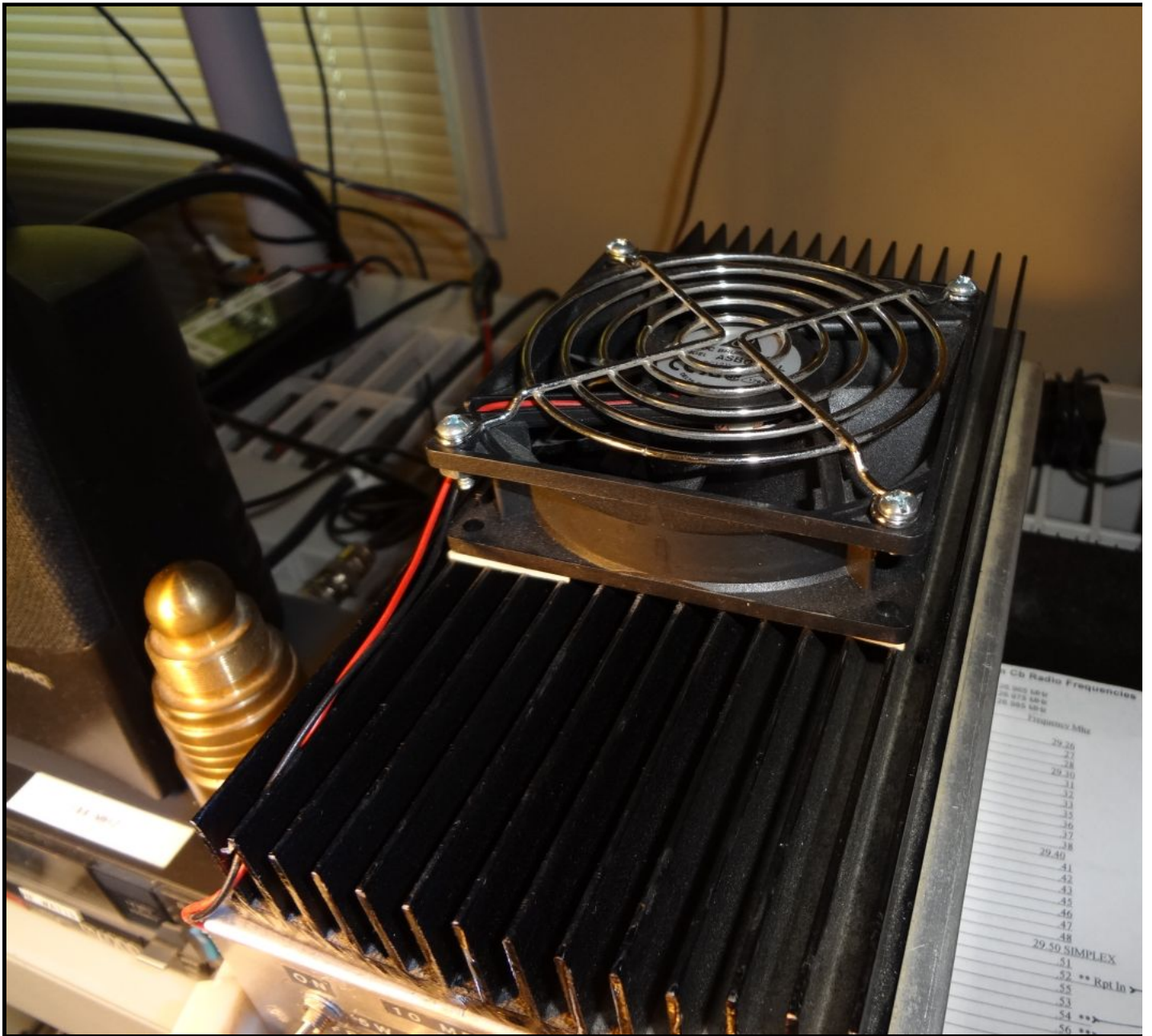
(1) 4" x 8" Heat Sink

(1) 4" x 8" x 2" Alum Box

SW1, SW2 = Small SPDT
Switches
Toggle







** FIN**
FIN