

## Valid Signal Alarm



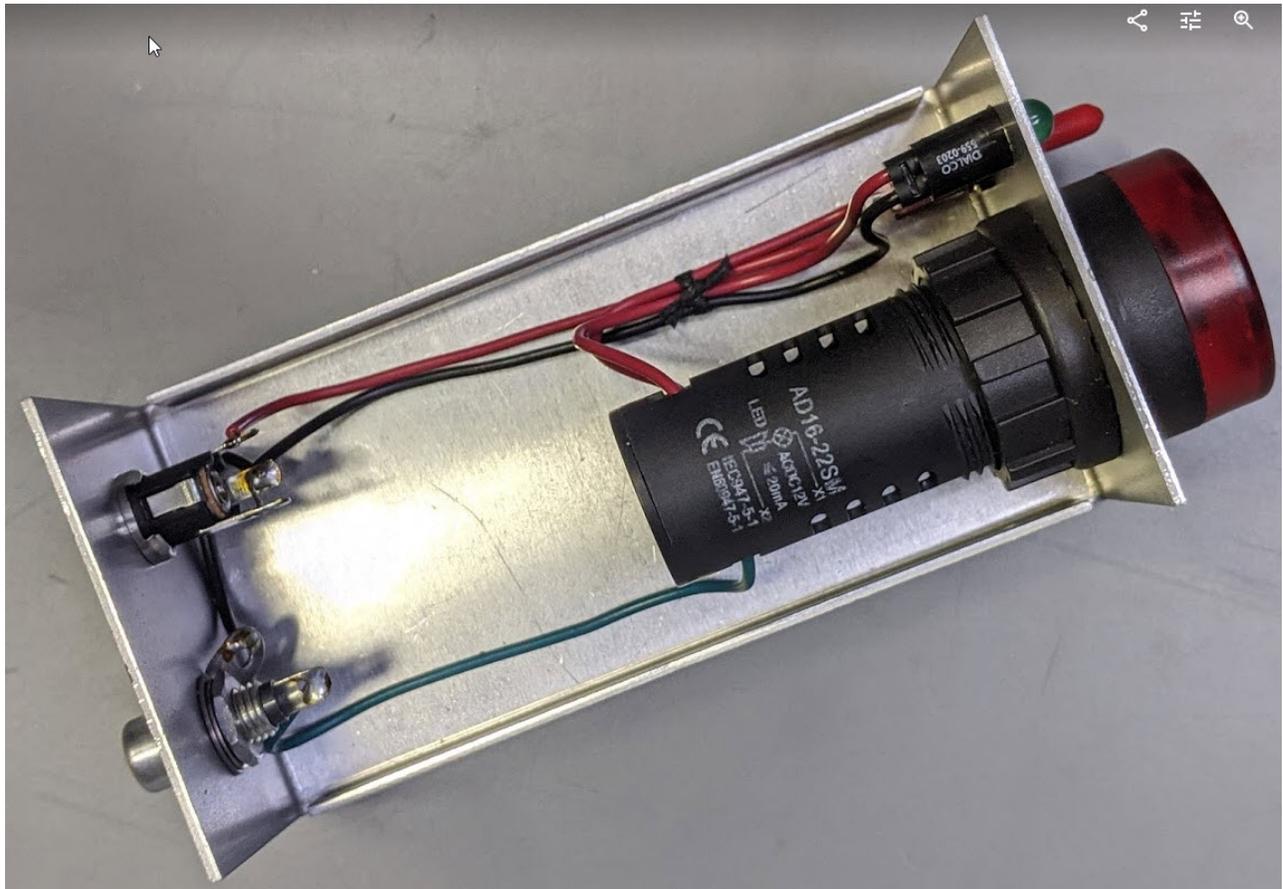
Jim Andrews, KH6HTV developed a circuit to control the PTT line for his repeater so when the receiver detected a valid signal it would turn on the transmitter. This is the same one used in the WOATN repeater. The PTT line is connected to an open collector transistor which could turn on other things like a relay, another light or in this case, a visual and audio alarm. Refer to the schematic and PCB layout.

The alarm “beeping” level may be controlled by simply blocking off the hole on its miniature “Sonalert” type of audio indicator. The alarm is available from eBay and Amazon for a few dollars. A switch was included to “disarm it.” A low cost plastic enclosure would work fine too. The interface between the Green LED and the alarm is made with a

small PC Board mounted inside the receiver. The 2N3904 Bi-polar NPN transistor will handle up to a couple hundred mills at a nominal 12vdc. Refer to the docs and pictures for building one for your Hi Des HV-110/120 or 122 DVB-T receiver. A bare PCB is available free to SLATS club members. Thanks to Bob, KD0JIY for help with the PCBoard design developed using open source KiCad.



12v at <50ma. RCA cable for signal to alarm



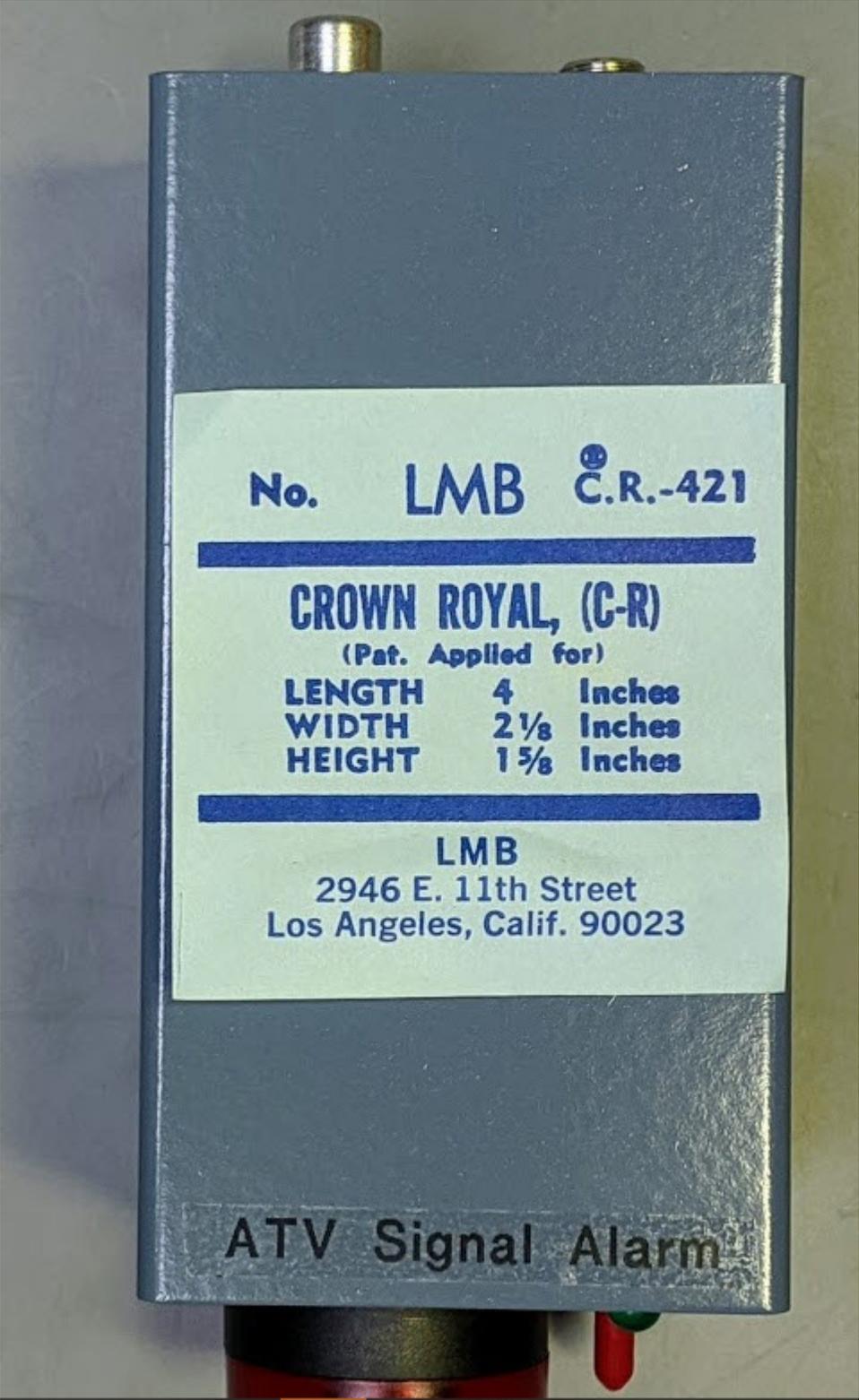
Inside view showing the Alarm. Come in a variety of colors (and prices!). P/N uxcell AD16-22SM 12v

Amazon

[https://www.amazon.com/uxcell-Pilot-Indicator-Flashing-Buzzer/dp/B07CWWY5BV/ref=pb\\_allspark\\_session\\_sims\\_desktop\\_328\\_7?encoding=UTF8&pd\\_rd\\_i=B07CWWY5BV&pd\\_rd\\_r=900d8b17-4016-4826-9259-1e39b7b7c05d&pd\\_rd\\_w=A42YZ&pd\\_rd\\_wg=90ndU&pf\\_rd\\_p=e500004d-dce5-4973-9afd-bba519c83f08&pf\\_rd\\_r=WHWGH3MGCZY047C0CJRT&psc=1&refRID=WHWGH3MGCZY047C0CJRT](https://www.amazon.com/uxcell-Pilot-Indicator-Flashing-Buzzer/dp/B07CWWY5BV/ref=pb_allspark_session_sims_desktop_328_7?encoding=UTF8&pd_rd_i=B07CWWY5BV&pd_rd_r=900d8b17-4016-4826-9259-1e39b7b7c05d&pd_rd_w=A42YZ&pd_rd_wg=90ndU&pf_rd_p=e500004d-dce5-4973-9afd-bba519c83f08&pf_rd_r=WHWGH3MGCZY047C0CJRT&psc=1&refRID=WHWGH3MGCZY047C0CJRT)

Ebay

<https://www.ebay.com/itm/1Pcs-Red-AD16-22SM-LED-Indicator-Lights-Buzzer-Signal-Pilot-Lamp-12V-/292244496583>



No. **LMB** **C.R.-421**

**CROWN ROYAL, (C-R)**

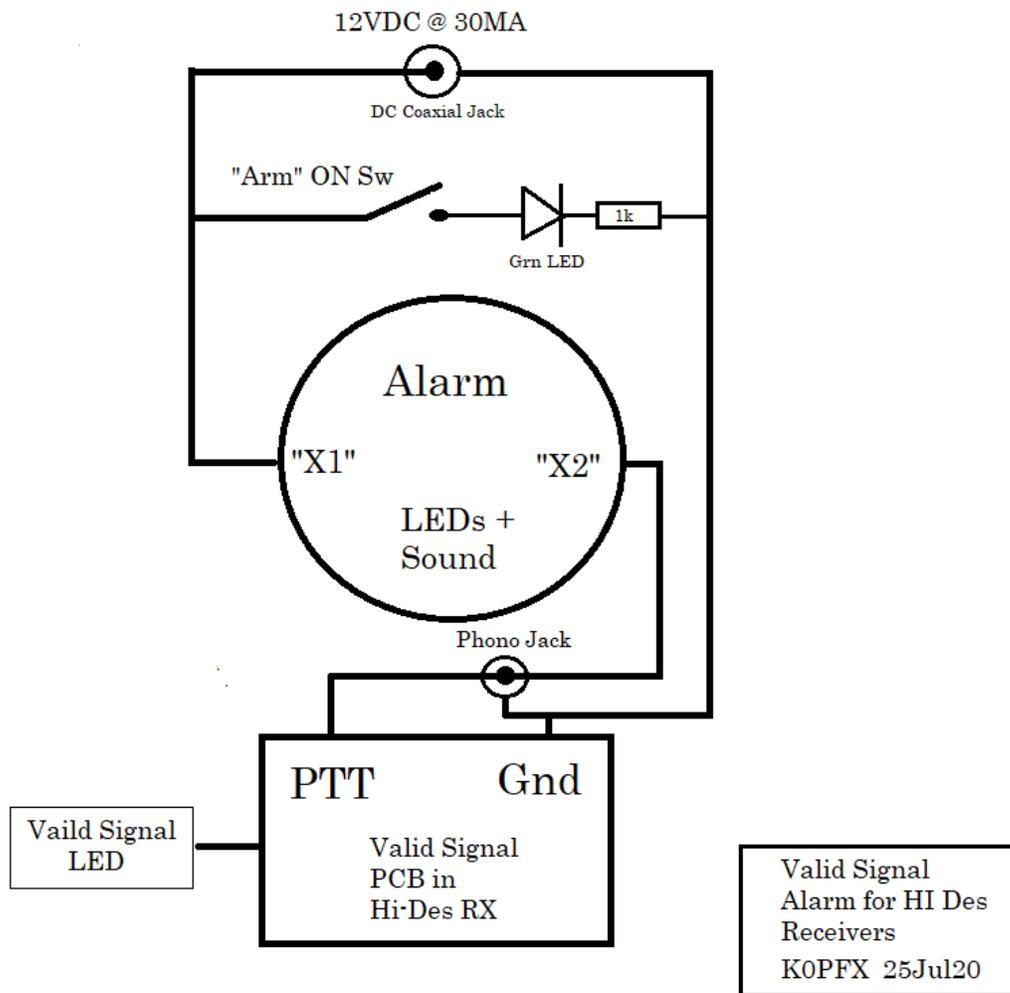
(Pat. Applied for)

<b>LENGTH</b>	<b>4</b>	<b>Inches</b>
<b>WIDTH</b>	<b>2 1/8</b>	<b>Inches</b>
<b>HEIGHT</b>	<b>1 5/8</b>	<b>Inches</b>

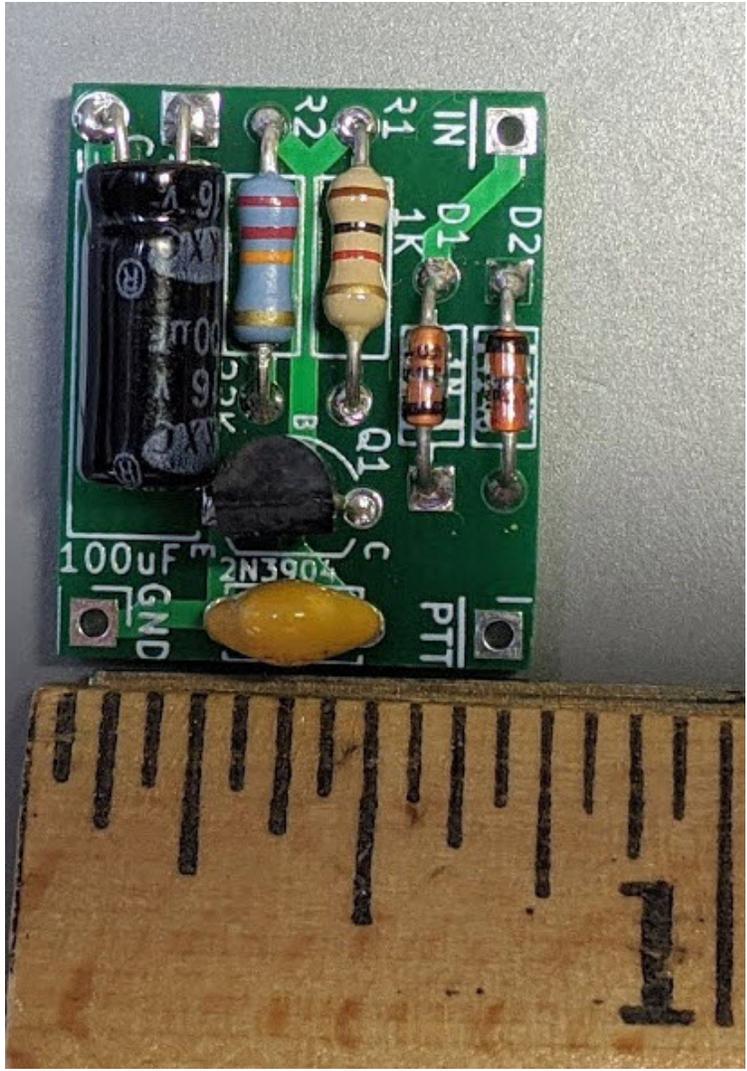
**LMB**  
2946 E. 11th Street  
Los Angeles, Calif. 90023

**ATV Signal Alarm**

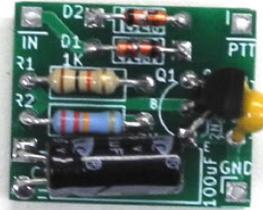
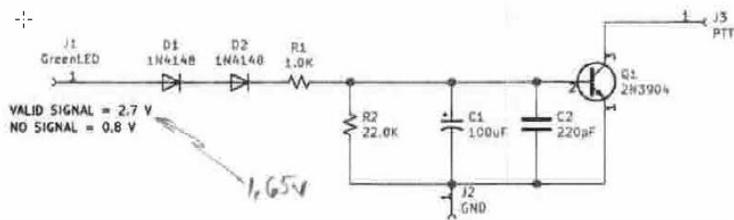
Enclosure found at surplus house.



Schematic of the Alarm circuit



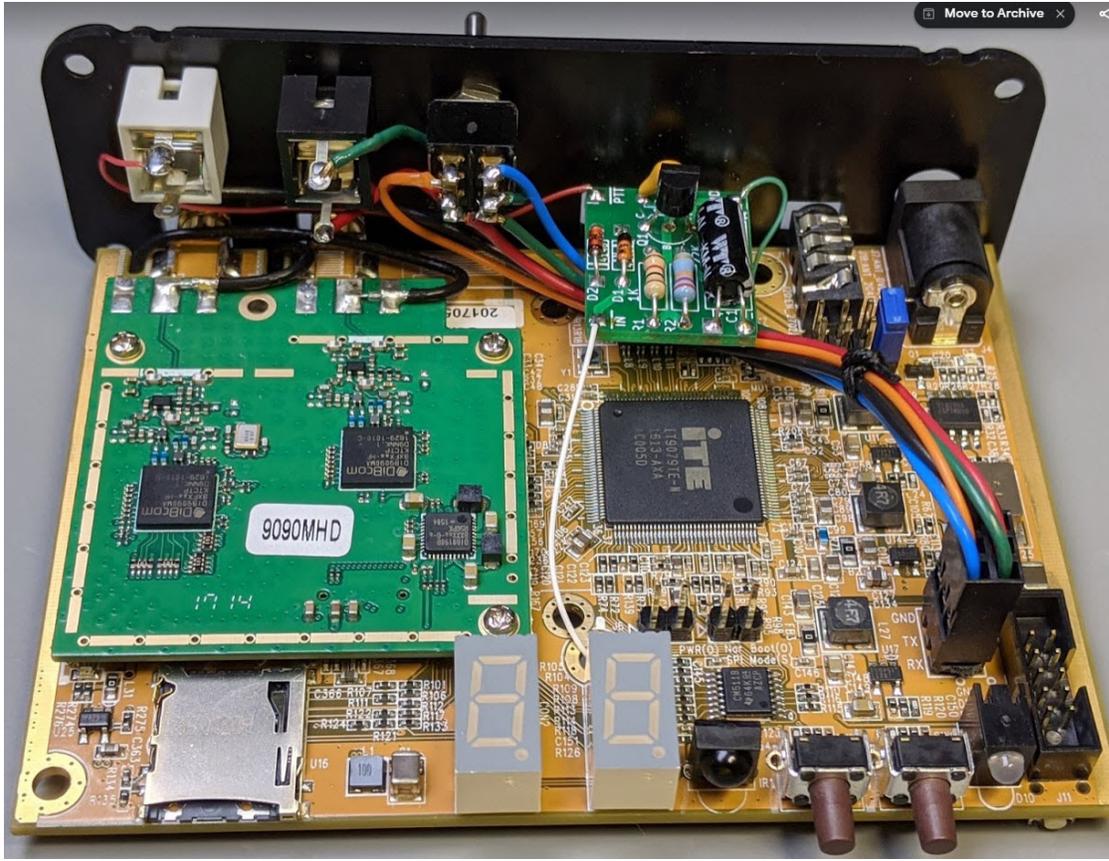
Valid Signal Board available from KOPFX



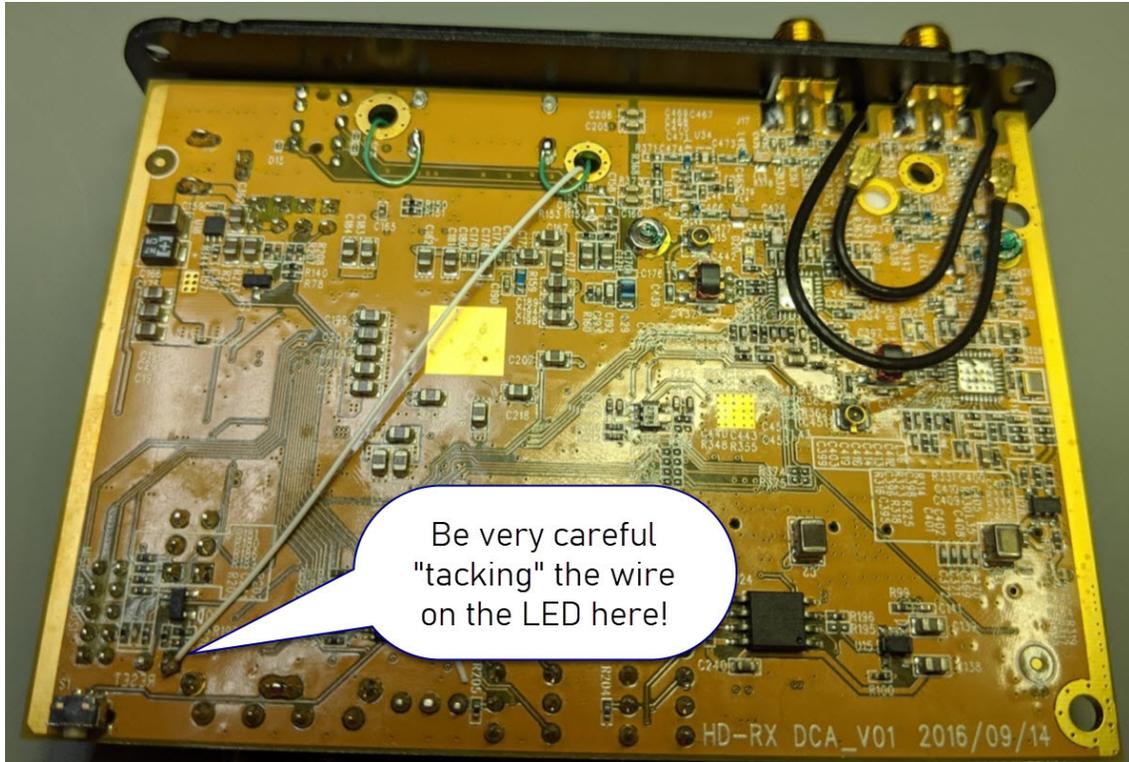
**Mel's "Valid DTV Signal" PCB:** Mel, K0PFX, in St. Louis, MO, has taken the "Valid Signal" pick-off circuit in the KH6HTV Video app. note, AN-23e, and made a very nice PC board for it. Mel's board measures only 0.7" x 0.8". The board is connected to the green signal lock LED in either the Hi-Des model HV-110 or HV-120

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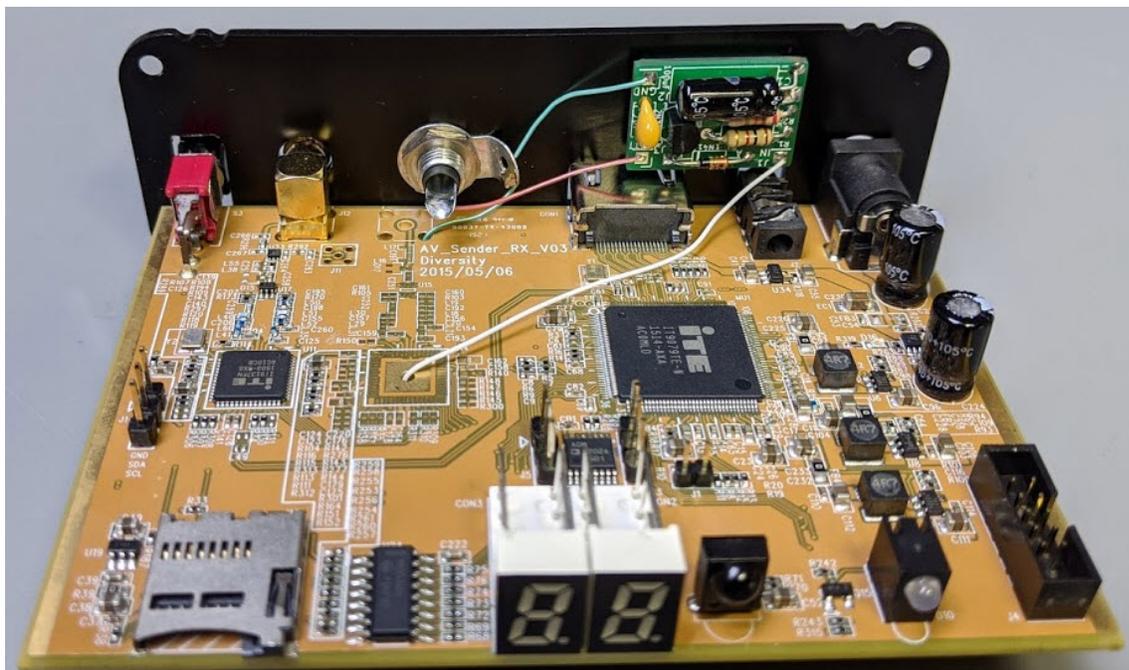
receivers. The voltage levels in the two receivers are a bit different. Thus, for the HV-110 only one diode is used in the pick-off circuit. The open collector output from Q1 can be used to key a PTT line in an ATV repeater, drive an alarm relay, etc. Mel says "I use a Chinese outfit, JLC, and delivery has been quite slow recently, but PCBs are very low cost." If you want further information about these PCBs, contact Mel at:



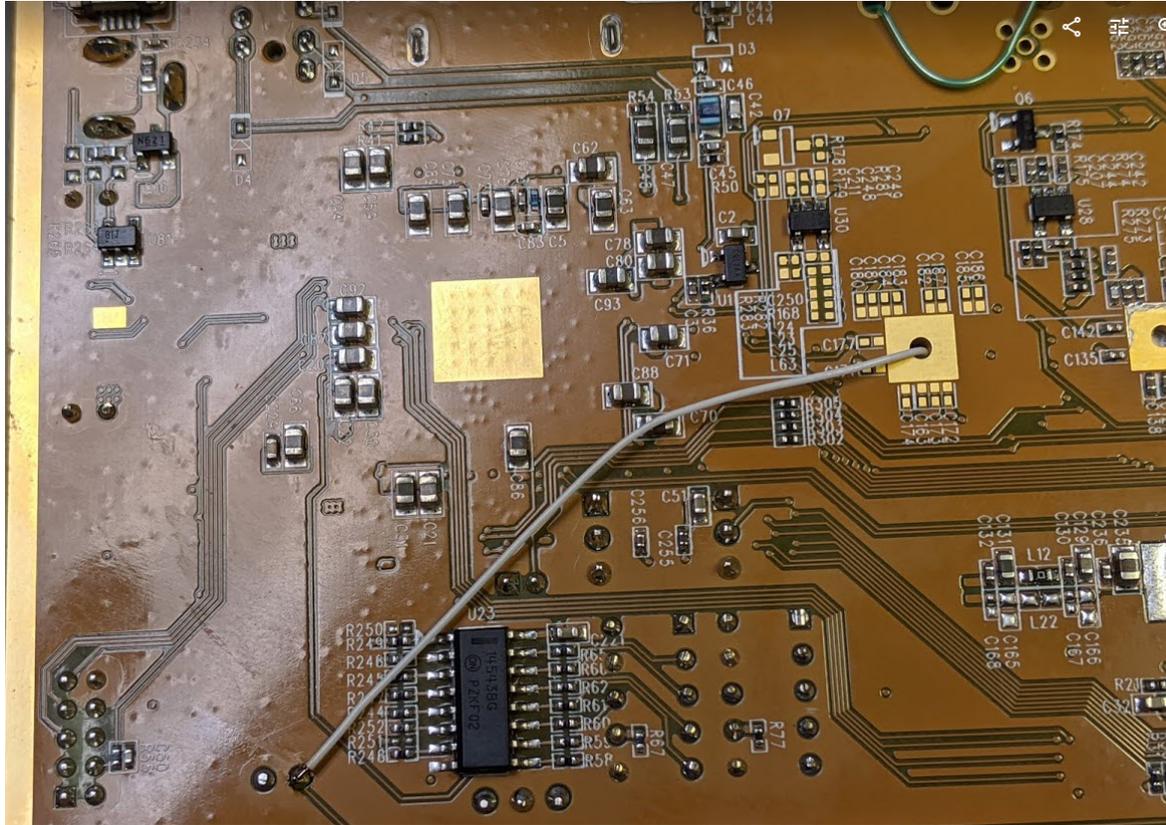
Valid Signal PC Board in a HV-120/122 receiver. PCB is located on top of the HDMI connector using double sided foam tape. 1/8<sup>th</sup> jack used here for PTT out.



Connection to the RED/GREEN LED made here for HV 120/122 receivers.



Valid Signal PC Board in a HV-120/122 receiver.  
PCB is mounted using double sided foam tape. RCA jack for PTT out to alarm.



Connection to the RED/GREEN LED made here for HV 110 receiver.