

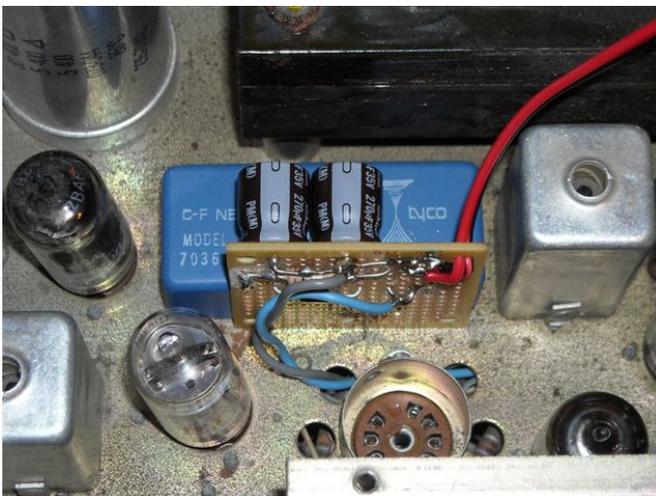
## X-Lock and Swan 270B

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The Swan 270B, AKA Signet, was a transceiver introduced in 1970 and, as happened with many Swans, got labeled as drifty. Here are pictures of my Swan 270B/X-Lock installation. You can see the small perf-board power supply hot-melt glued to the IF filter. The 12.6 vac comes from below the chassis to the perf-board and the approximately 17 vdc comes off the perf-board to the X-Lock stuck to the cover of the VFO. I used double-sided tape. The RF input comes from below the chassis where the VFO buffer output is attached to the VFO amp tube. I used RG174 for that. The project required two holes in the VFO box, one for a screw to mount the terminal strip that you can see on the inside view of the VFO. The other hole is for the VAR voltage to the varactor circuit on the terminal strip and is hidden from view behind the terminal strip in Figure 3. The varactor circuit required a 3.4 pf cap consisting of two smaller ones in parallel which achieved the required deviation for a twelve volt swing. I actually got closer to 30 KHz instead of the suggested 20 KHz but the circuit worked fine from the get-go. I attached it to the inductor which parallels the main tuning cap. It locks the frequency to within a max of 3 Hz for the time I monitored it while the specs are for 10 Hz. It was a great project but took a little longer than I thought as the older analog circuitry required a little more tinkering and testing than the circuitry in the Heathkit SB-104A which I had modified earlier. As an example of the tinkering and testing, the 10 meter portion of the VFO would not retune after the added capacitance of the varactor circuit. I found that replacing the 5 pf cap that was original with a 2 pf one solved the problem and I was able to bring the band back into the dial. I routed the tri-color LED to the S-Meter and held it in place with some blue putty. Its glow will be seen through the clear plastic of the meter.



Swan 270B Cignet, Figure 1



Added Power Supply, Figure 2



**Added Varacter Circuit, Figure 3**



**X-Lock mounted on VFO Cover, Figure 4**