To: VSRT Group
From: Alan E.E. Rogers
Subject: Parts list for Ozone spectrometer

1] Dish
   Satellite TV dish with low f/D. Recommend Winegard DS-4047 or DS-4048 (see memo #41). Either dish needs plastic feed (LNBF) support. This part is not easy to find. Try searching for LNBF brackets or clamp. For example – “Clamp-single LNBF bracket” from glorystar.tv (price $10). This should fit DS-4048. When used with DS-4047 an aluminum angle bracket as seen in memo #50 is needed. It is useful to attach a mirror to the dish center for alignment. A mirror is available from Edmund Scientific (part #3052323 or CAT#100007586 Flat 38×38 mm). For alignment a level is needed. Sonin 10012 Calcu-Tape is suggested.

2] Cables
   LNBF to downconverter 50’ quad shielded RG-6
   Calibrator to downconverter 50’ LMR-240 with SMA male connectors on each end.

3] LNBF Fortec FSKU-VN (LO 9.75 GHz)
   10 dB DC pass attenuator MR-20454
   or
   10 dB inline amplifier + power injector Radio shack SKU 15-1170

4] PCI bus ADC card measurement computing PCI-DAS 4020/12
   Cable and I/O extender measurement computing BP40-37F

5] Linux PC – current software uses AMD CPU for FFT

6] Minicircuits  
   BLP-7-75  75 ohm termination
   VLF-80  LPF
   VHF-1200  HPF

7] Power supply  
   Astrodyne  PV15-12S

8] 37-pin Male cover D connector  
   Digikey  L717DC37P-ND
   17E-1727-1-ND

9] Box Hammond Mouser 10”× 6” × 2” Part #1444-16

10] Pulse generator
   Pulse generator (see circuit and parts list) and drawing of box Hammond 7007 1590LLB HM948-ND. Clear plastic water bottle with bottom removed used as a rain shield.
Semi-rigid line with 0.25” center conductor exposed.

11] Downconverter

See circuit and parts list and drawing of box Hammond 1590N1
Figure 1.
Figure 2.
Figure 3.