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To: VSRT Group
From: Alan E.E. Rogers
Subject: Parts for initial tests of VSRT

The list below is sufficient for the initial set-up of a single baseline (2 dish) VSRT interferometer.

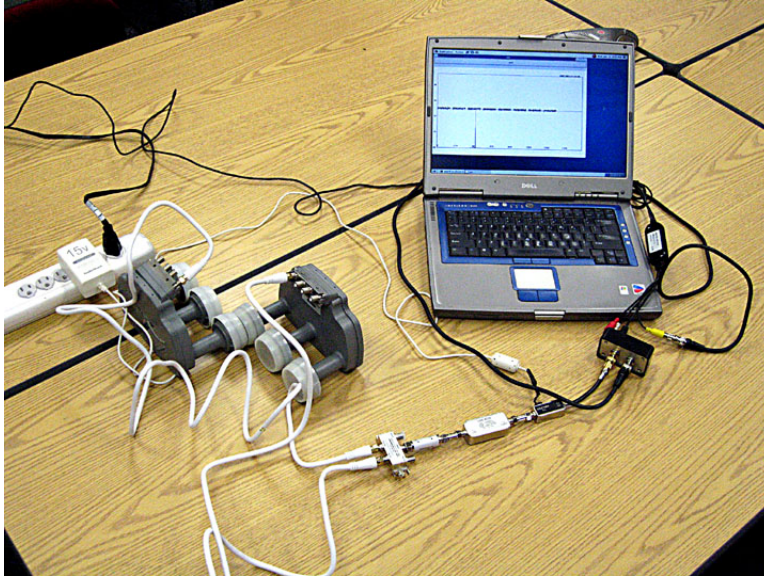
VSRT parts:

Description	Part No	#req	source	\$each
18"x20" DIRECTV Satellite Dish Antenna with 3 dual LNBS	WNC AU2-F1 or equiv.	2	Amazon.com	\$68
4-way splitter DC pass all ports	Channel vision HS-4	1	Amazon.com	\$10
In-line amplifier and power injector	15-1170	1	RadioShack	\$37
In-line amplifier	CAE-9220	1	Amazon.com	\$7
CompUSA Video Grabber USB 2.0	SKU 318714	1	CompUSA	\$50
15v AC-to-DC Power Adapter	273-1691	1	RadioShack	\$25
3-amp barrel diodes 1N5404 (3 in pack)	276-1114	1	RadioShack	\$2
male-to-male "F" connector adapter	278-219	2	RadioShack	\$3
"F" connector to BNC jack adapter	278-277	1	RadioShack	\$5
Coaxial Adapter, BNC female / RCA male	278-250	1	RadioShack	\$5

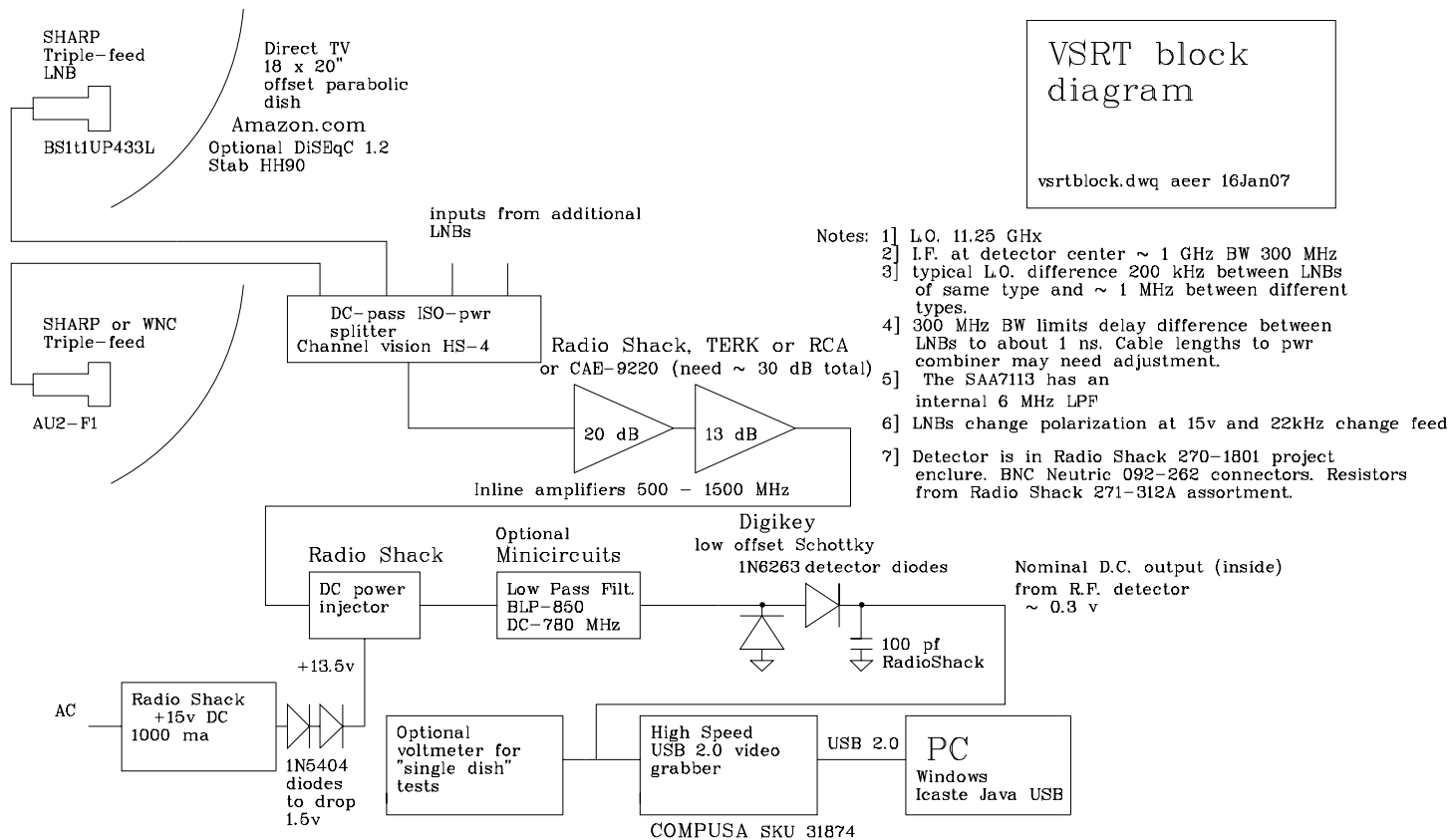
detector diode IN6263	497-2508-1-ND	1	digkey.com	\$1
M61235 6' RG-6 cables with F connectors	M61235	2	Amazon.com	\$3
6-ft RG-59 Coax cable (BNC)	278-990	1	RadioShack	\$8
Low pass filter (optional) DC to 780 MHz	BLP-850	1	Minicircuits	\$33
1/4 watt resistor assortment	271-312	1	RadioShack	\$12
100pt capacitor	272-123	1	Radio Shack	\$2
project enclosure (3x2x1)	270-1801	1	RadioShack	\$2
BNC chassis-mount Jack	Neutric 092-262	2	Amazon.com	\$14
JcommUSB API	Personal Edition	1	Icaste.com	\$35
			total	\$405
			Shipping est.	\$80
			total	\$485

Added notes:

At this time there is still some uncertainty in the best choice of amplifiers and amplifier gain ahead of the detector. Also I am investigating a detector design with better square law response.



All these parts were recently procured and set-up as shown in figure 1.



According to the block diagram in Figure 2.

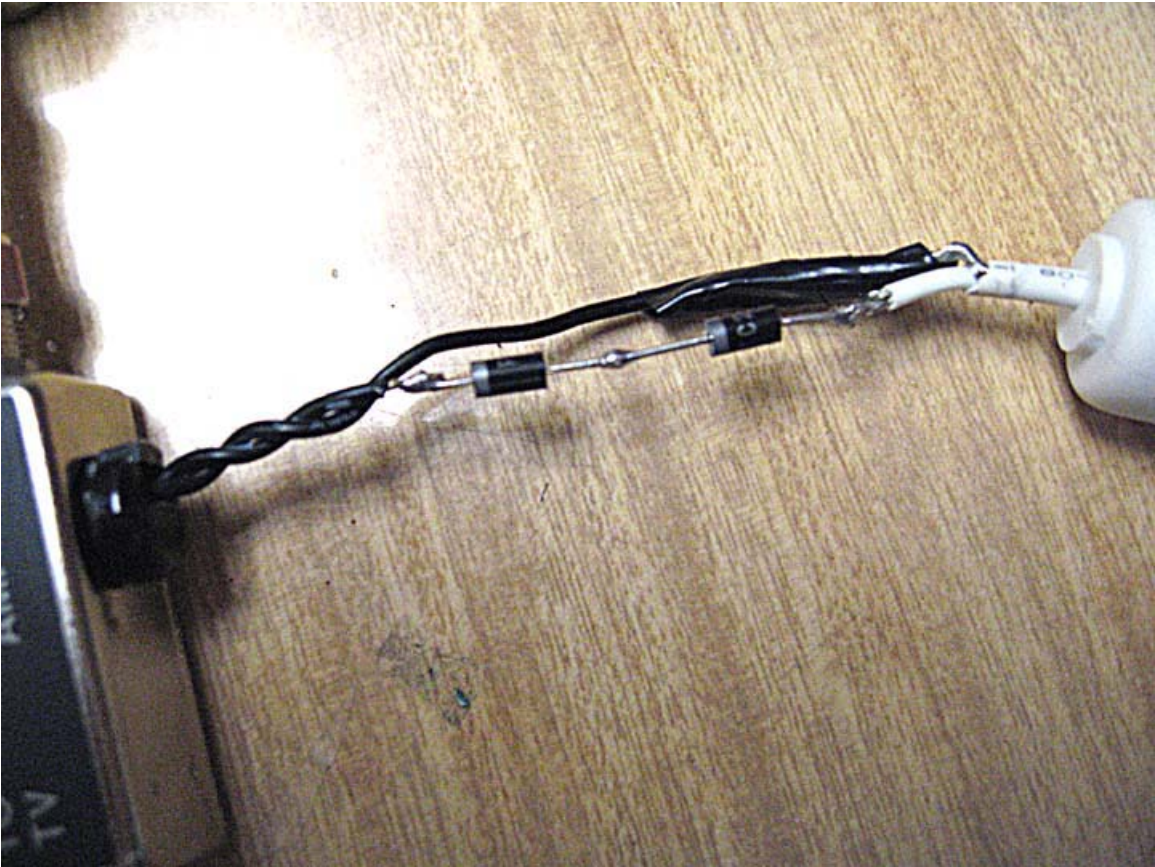


Figure 3 shows the detail of the diodes (before using electrical tape to cover the connections) used to reduce the 15 v to 13.5 v and

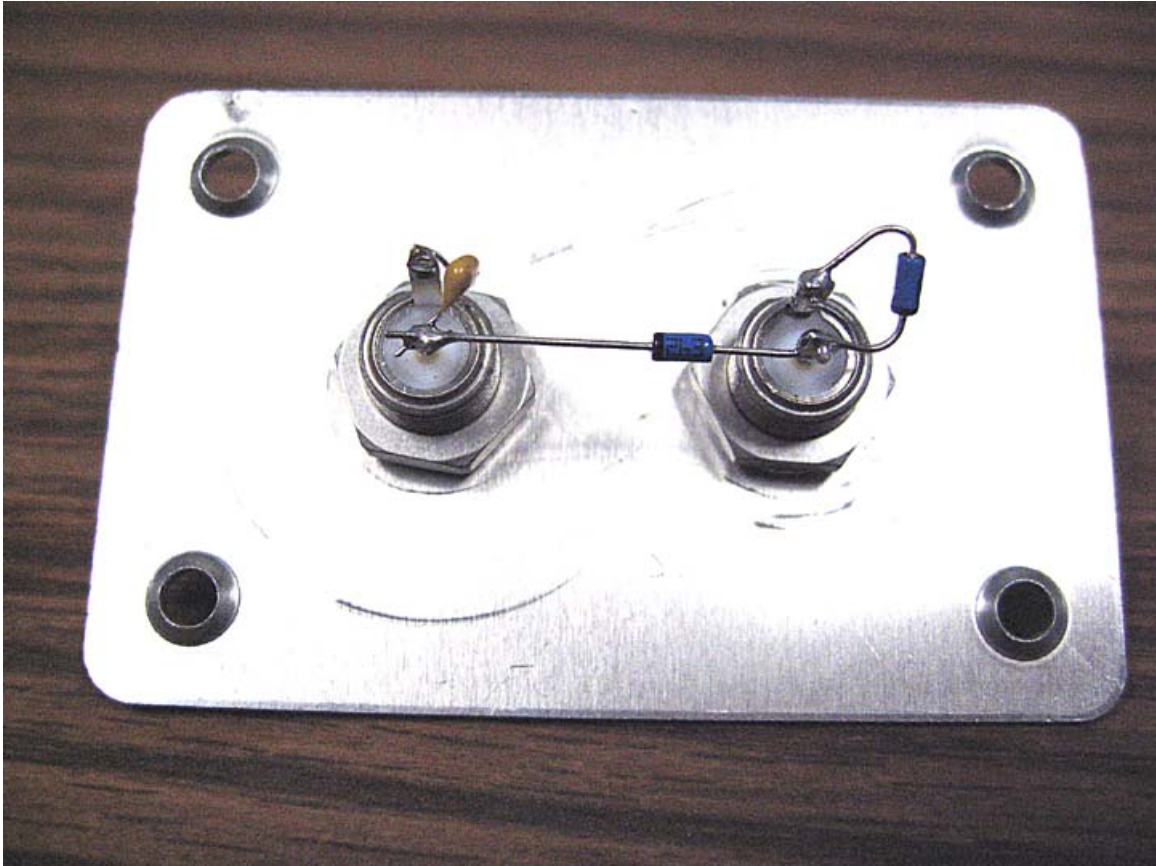


Figure 4 shows the detail of the detector with the plastic base of the project box (270-1801) removed.