

APRS Tracking System Description

The tracking system comprises a Monitoring system that is to be located at the COMS position at the ICS. There are 2 Portable Digipeaters that are to be located along the activity course.

The Antenna used at the Monitoring Station can either be a omnidirectional Antenna (Ventenna) if located in-between Digipeaters or a directional antenna is located at one end of the operational course. The same antenna configuration can be used of the Digipeaters.

A few pictures of the Digipeater and of a Tracker unit. The Digipeaters are built into a Metal Ammo Can. There are 2 7/8 AMP hour batteries installed in the lower back compartment. The TNC-X with Digipeater daughter card is installed in the forward lower compartment



LED are used to show the state of the Digipeater, Green for On, Red for Transmit and Yellow for Received data. A LED Voltage/Current meter is installed in the enclosure. System is protected by a Fuse and a key switch for On/Off.

The inner structure is built from ¼ inch hobby plywood and aluminum brackets.



Two of the Tracker Units are built using a Byonics TinyTrack APRS units, GPS unit and BAOFENG UV-5R Transceivers.



One Tracker is built with using a BAOFENG UV/5R Plus. The original 4th Tracker uses an earlier model BAOFENG transceiver (included as a Free unit. I don't need it anymore)

Proposed Pricing:

Pricing is based on many of the materials on hand that I used in my original system, antennas, Radios, etc. Some parts need to be purchased new.

APRS Portable Tracker System				
Qty	Item	Description	Price	Total
2	2 Meter DigiPeater	Custom Digipeater built with 2Meter Mobile, CostalChipworks Digipeater, 2x8AH SLA Batterys. Built into Metal AmoCan	\$ 450.00	\$ 900.00
3	Antenna Tripod	Heavy Duty Tripod - Portable Antenna Mount	\$ 50.00	\$ 150.00
2	24FT Coax Feedline	LMR-200 Feedline, Terminated with PL-259 UHF	\$ 25.00	\$ 50.00
1	40FT Coax Feedline	LMR-200 Feedline, Terminated with PL-259 UHF	\$ 25.00	\$ 25.00
1	Packet TNC	Costal Chipworks TNC-X with USB interface - Assembled, Wired	\$ 100.00	\$ 100.00
1	Win10 PC	Lenovo Notebook pre Loaded with SARTRACK APRS Tracking Software	\$ 350.00	\$ 350.00
1	VHF Tranceiver	Yaesu FT-1900R VHF Tranceiver - Cabling	\$ 100.00	\$ 100.00
3	16 FT Puah-Up Mast	-Looking for best choice	\$ 100.00	\$ 300.00
2	Ventenna VHF	Omni Directional Antenna	\$ 50.00	\$ 50.00
2	4 Element Yagi	4 Element Yagi Antenna	\$ 75.00	\$ 75.00
3	Portable Tracker	1/4 Watt Portable Tracker Units, Including GPS,5/8 whip antenna	\$ 150.00	\$ 450.00
1	Portable Tracker	Original Prototype unit - uses lower power Tranceiver - Free	\$ -	\$ -
4	Antenna Mount	Custom Mounting Hardware for Ventenna and YAGI	\$ 100.00	\$ 400.00
			Total	\$2,950.00
Not Included in Package				
	12V Power Source for Base Radio			
	A/C Power for Notebook Computer			
	Battery Charger for Digipeater Systems			