

**Ham 51 – Almost, OK, to Great**  
 Dr. Marc & Rosemary © 220904

1. We have made suggestions about equipment several times, even looking at very basic start-up options. Budgets are a real thing. In this article, we will provide suggestions from *Almost acceptable* to *OK* to *Great*.
2. The components are antenna, coax, radio, and power supply. Coax only has one choice. Anything less results in too much loss to be used or reliable.
3. *Almost Acceptable* category is a radio system which will work in some conditions and locations, but is not generally reliable enough for emergency communications. This will sometimes work, but tends to be frustrating to the user and the parties on the other end because of limited signal strength. This is any radio of less than 50-Watts in our area. Although you often do not need 50-Watts, that is the minimum to get around the hills and terrain, reliably. This is any radio not dual-band, since VHF/UHF is required to access the local repeater and to do weather, an important use in our area.
4. The *OK* category should work and may be reliable for years, but has trade-offs. Performance is proportional to cost. The power supply is small and has a potentially noisy fan. The radio is mass produced of China vintage. The screen has compromises. Several other China derivatives are greater than \$200 and approaching the cost of the top performer. Anything over \$210, save your shekels and get the better radio.
5. The *Great* category is unchanged. This is a premium unit of Japan technology. Although there are more expensive and less expensive, this radio gives dual-band coverage, in a flexible mounting, with ease of use, dual controls for dual receivers, brightly-lit readable display, and adequate power.
6. The antenna category gives the widest flexibility for trade-offs. The antenna is perhaps the most critical part. With a great antenna, a mediocre radio will perform well. A great radio with a poor antenna is just an expensive boat anchor.
  - a. Start from the \$10 quarter-wave ground plane ham-brew, made from Lowe’s components plus a bulkhead barrel connector. The counterpoise version uses a more expensive \$15 NMO to SO239 connector.
  - b. The *OK* category for base is the \$45 Ed Fong DBJ-1. Numerous other home-brew, J-pole, and colinear designs operate with varying level of performance. Talk to an Elmer.
  - c. In the group experience, the bar-none equal for our conditions is the 9” COMPACTenna for mobile at \$110. For the slight difference in cost and the substantial difference in performance, that is the go-to mobile.
  - d. For base antenna, add the \$100 counterpoise. Although a little less calibrated performance, a home brew counterpoise, like the \$10 home-brew, is a reasonable first step, until money is available.
7. The equipment is mix-and-match. Pick what fits your budget and goals at the time. The prices are current today. The prices in parenthesis are what others have paid at MTC. Main Trading Co in Paris, TX (mtcradio.com) tends to be a little more competitive and often has deals or will sell you a package. DX Engineering and Ham Radio Outlet are the big guns and often have sales. Shop around.



Device	Almost	\$	OK	\$	Great	\$
Antenna base	1/4 wave with ground	10	Diamond X50	100	COMPACTenna 9”	110
Antenna mobile					COMPACTenna 9”	
Counterpoise base			Home-brew	20	COMPACTenna	100
Radio	Handi-Talkie	25-89	TYT TH-7800	160	Icom 2730A	305 (259)
Power supply	TekPower TP30SWI	120 (77)	Samlex SEC-1223BBM	140	Astron SL-15R	169

8. There is not much option on coax, except the length. Avoid Amazon where quality is undetermined.

Coax to Poly	DXE	RG-213/U	25', 50-Ohm, copper	DX Engineering	DXE-213UDX025	52
Coax from Poly	DXE	RG-213/U	25', 50-Ohm, copper	DX Engineering	DXE-213UDX025	52
Surge protection*	PolyPhaser	IS-50UX-CO	Coaxial lightning protector	Ham Radio Out	IS-50UX-CO	77
Barrel connector	DXE	PL-258	Double SO-239 adapter	DX Engineering	DXE-536-4	4
Coax to radio	DXE	RG-8X	3', 50-OHM,	DX Engineering	DXE-8XDX003	15 - 29

9. An *Almost* station is \$110 antenna to compensate some for the marginal radio, \$10 counterpoise and \$25 handi plus coax. A pretty-fair *OK* station would be \$10 quarter wave, \$100ish TekPower with \$160 TYT. If coax is short, that is under \$300. Top of the line is \$515 plus coax and protector.

10. Let’s do what it takes to get you on the air. You have the license, that is the hard part.

11. Life is good. Enjoy!

