

New RMG Beacons



For 144, 432, and 902 MHz

TX Beacons 1296 MHz & Above

Freq.(MHz) +/- 3KHz	Locator	Pwr (W)	Antenna	Elevation Gnd ASL / Ant AGL	Callsign	Status
1296.346	EM13kf Denton,TX	2	Alford slot	699' / 280'	"W5HN"	Active
1296.400	EM00xh Austin, TX	15	helical collinear omni	1240' / 45'	"WA6UFQ"	Active
1296.360	EL07wu Alice, TX	2	big wheel (folded dipoles)	234' / 90'	"K5DYY"	Active
2305.001	EM13s3 McKinney, TX	1	Alford slot	574' / 45'	"AA5C"	Active
3456.325	EM13qd McKinney, TX	0.2	Alford slot	607' / 40'	"W5HN"	Active
5760.325	EM13kf Denton,TX	0.025	6 slot WR-137	699' / 280'	"W5HN"	Active
10368.238	EM13kf Denton,TX	0.025	8 slot WR-90	699' / 280'	"W5HN"	Active
10368.180	EM00xh Austin, TX	1.2	180 deg horn to East	1240' / 45'	"K5RMG"	Active
10368.215	EM10ch Austin, TX	2	8 slot WR-90	900' / 40'	"NO5K"	Active
24192.100	EM13kf Denton,TX	0.001	18 dB horn to East	699' / 280'	"W5HN"	Active
24192.260	EM13kf Denton,TX	0.05	16 slot WR-42	699' / 280'	"AA5C"	Active

TX Beacons 903 MHz & Below

Freq.(MHz) +/- 3KHz	Locator	Pwr (W)	Antenna	Elevation Gnd ASL / Ant AGL	Callsign	Status
50.060	EM01rk Goldwaite, TX	20	loop	1716' / 30'	"K5AB"	Active
50.070	EM13sj McKinney, TX	0.5	halo	696' / 180'	"W5HN"	Active
144.281	EM13sj McKinney, TX	1.5	halo	696' / 180'	"W5HN"	Active
222.060	EM13s3 McKinney, TX	8	folded dipole	574' / 45'	"AA5C"	Active
222.060	EM10bf Austin area	10	stacked big wheels	1100' / 30'	"K5TRA"	Active
432.380	EM13kf Denton,TX	0.5	square loop	699' / 280'	"W5HN"	Active
902.370	EM13kf Denton,TX	6	Alford slot	699' / 280'	"W5HN"	Active
903.100	EM00xh Austin, TX	10	big wheel (folded dipoles)	1240' / 45'	"K5RMG"	Active
903.076	DM80nv Ft Stockton, TX	3	9.9dBi yagi to East	3000' / 60'	"NN5DX"	Active

New RMG Beacons

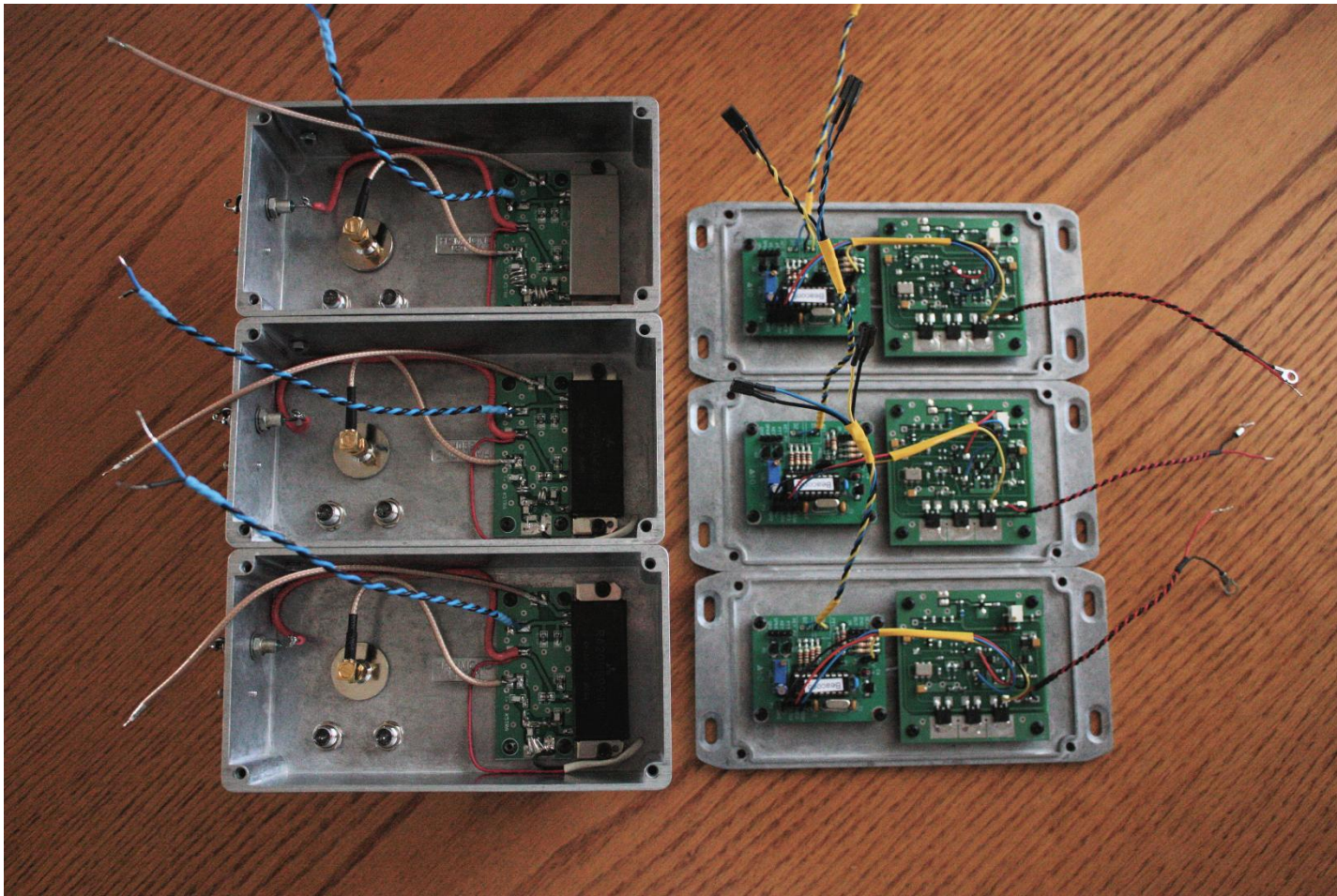
Freq.(MHz) +/- 3KHz	Locator	Pwr (W)	Antenna	Elevation Gnd ASL / Ant AGL	Callsign	Status
144.295	EM00xh Austin, TX	10	Par Omniangle	1240' / 45'	"K5RMG"	Completed
432.345	EM00xh Austin, TX	10	big wheel (folded dipoles)	1240' / 45'	"K5RMG"	Completed
902.330	EM00xh Austin, TX	10	Helical Collinear	1240' / 45'	"K5RMG"	Completed

POWER CHANGED FROM PLAN FOR 144 AND 432 BEACONS

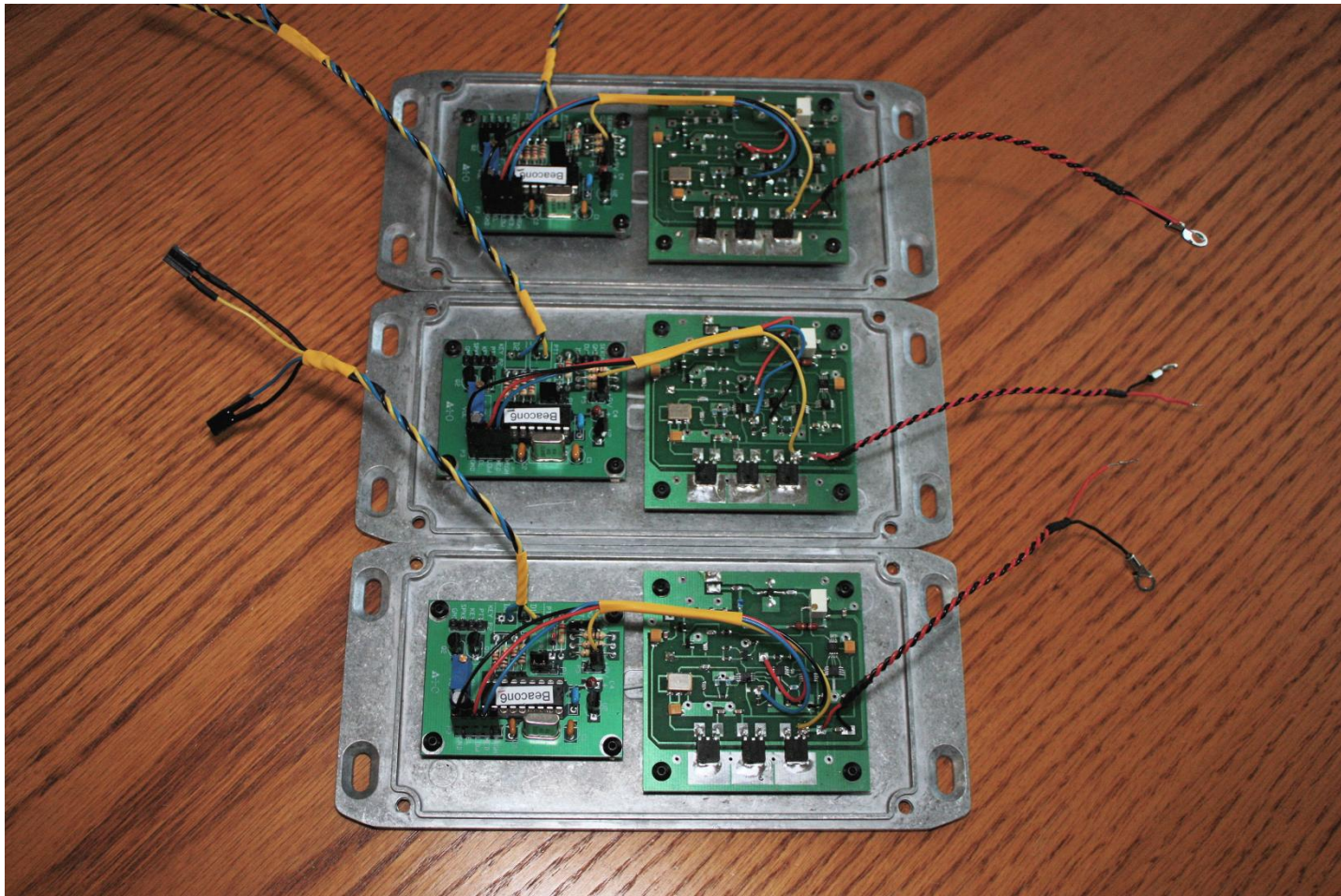
Completed Beacons



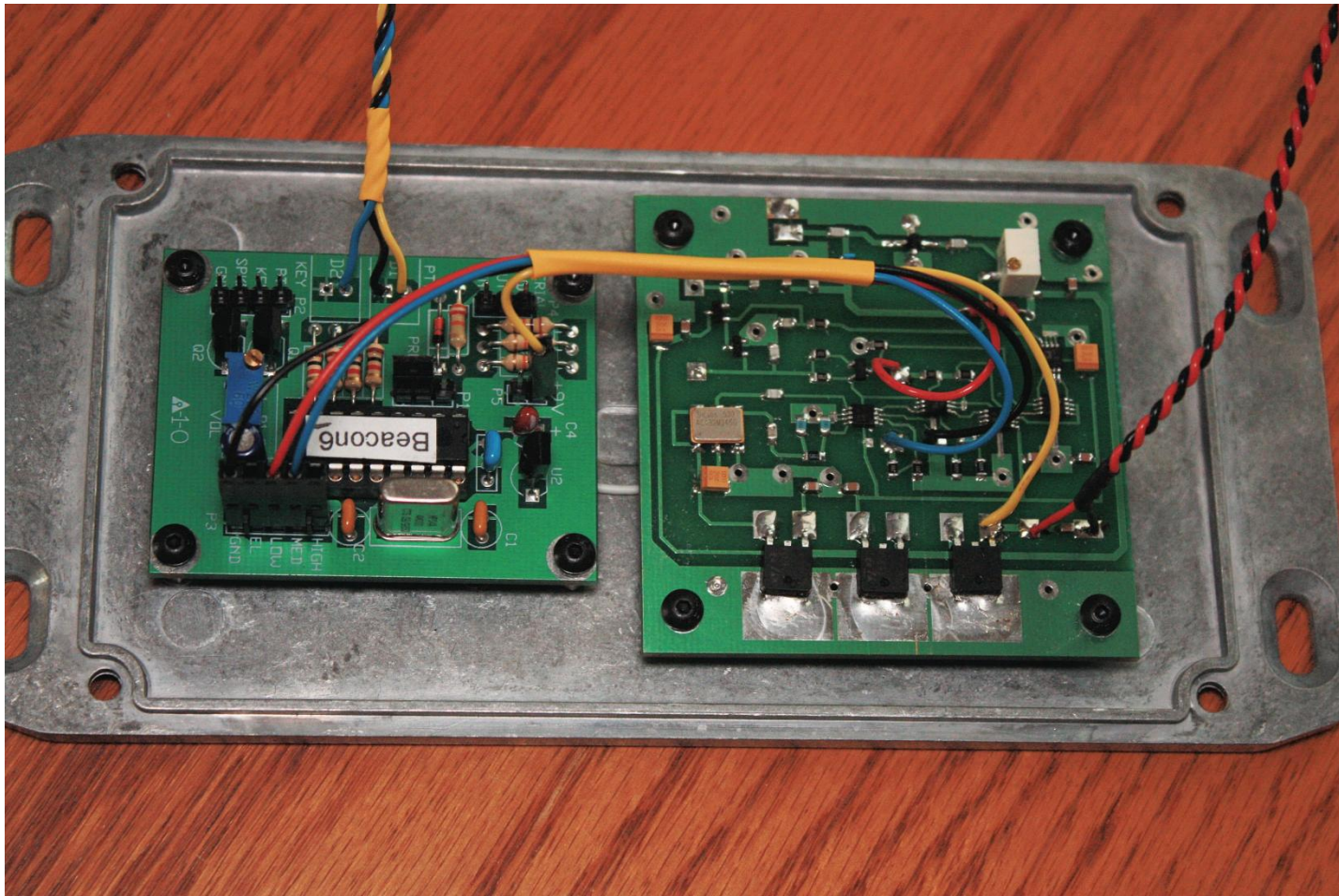
Beacon Interior



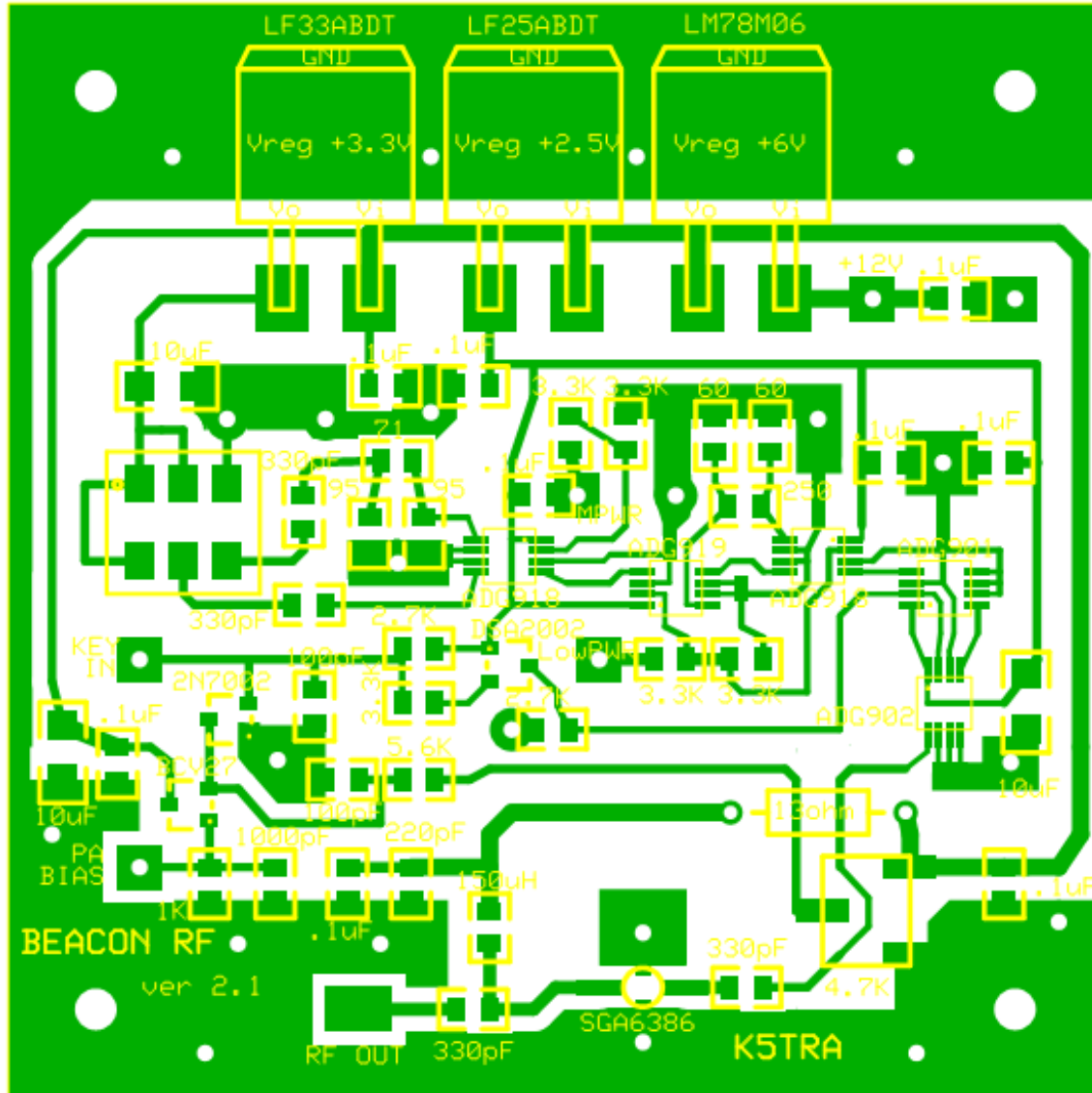
RF and Controller Boards



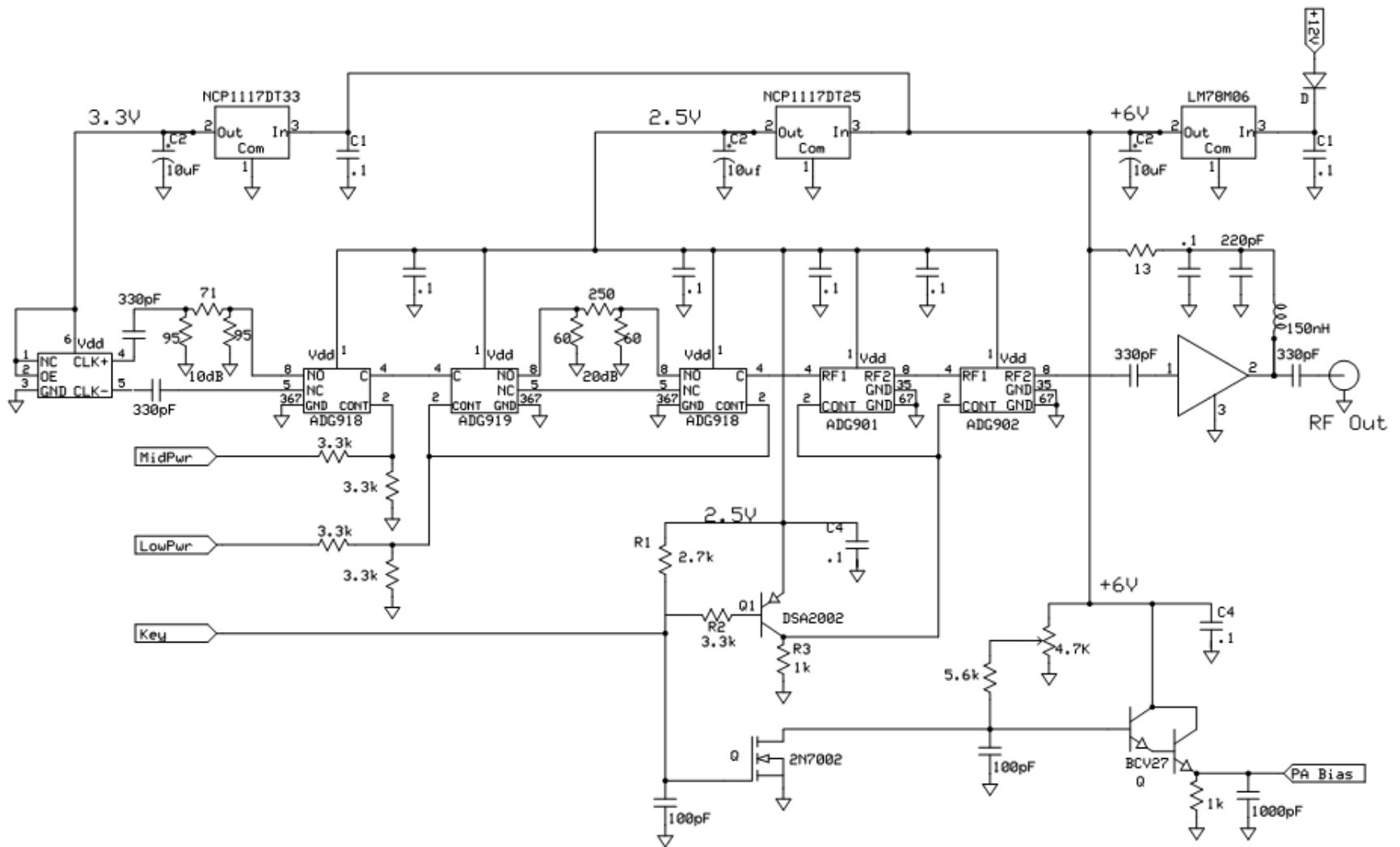
RF and Controller Boards



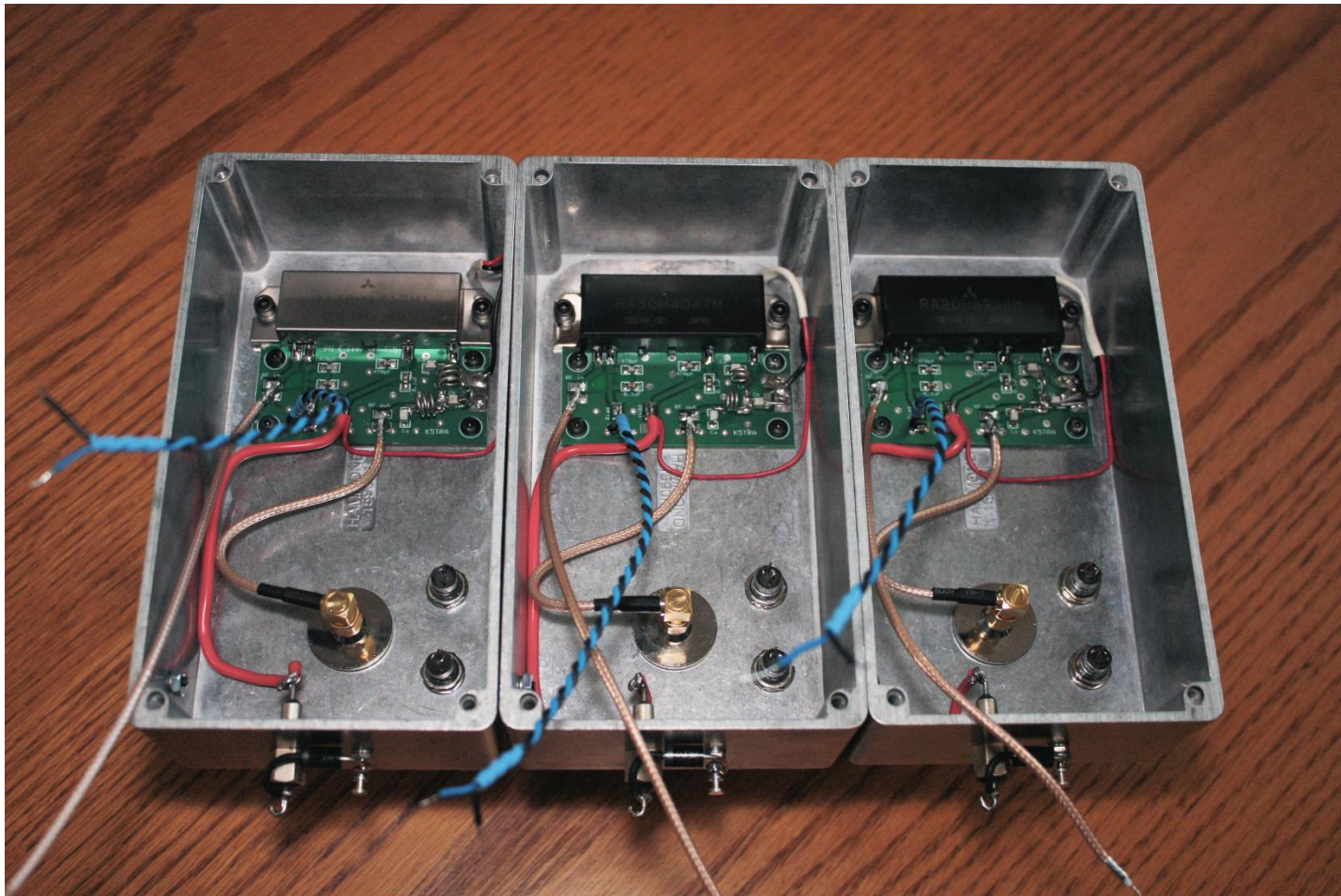
Beacon RF Board Layout



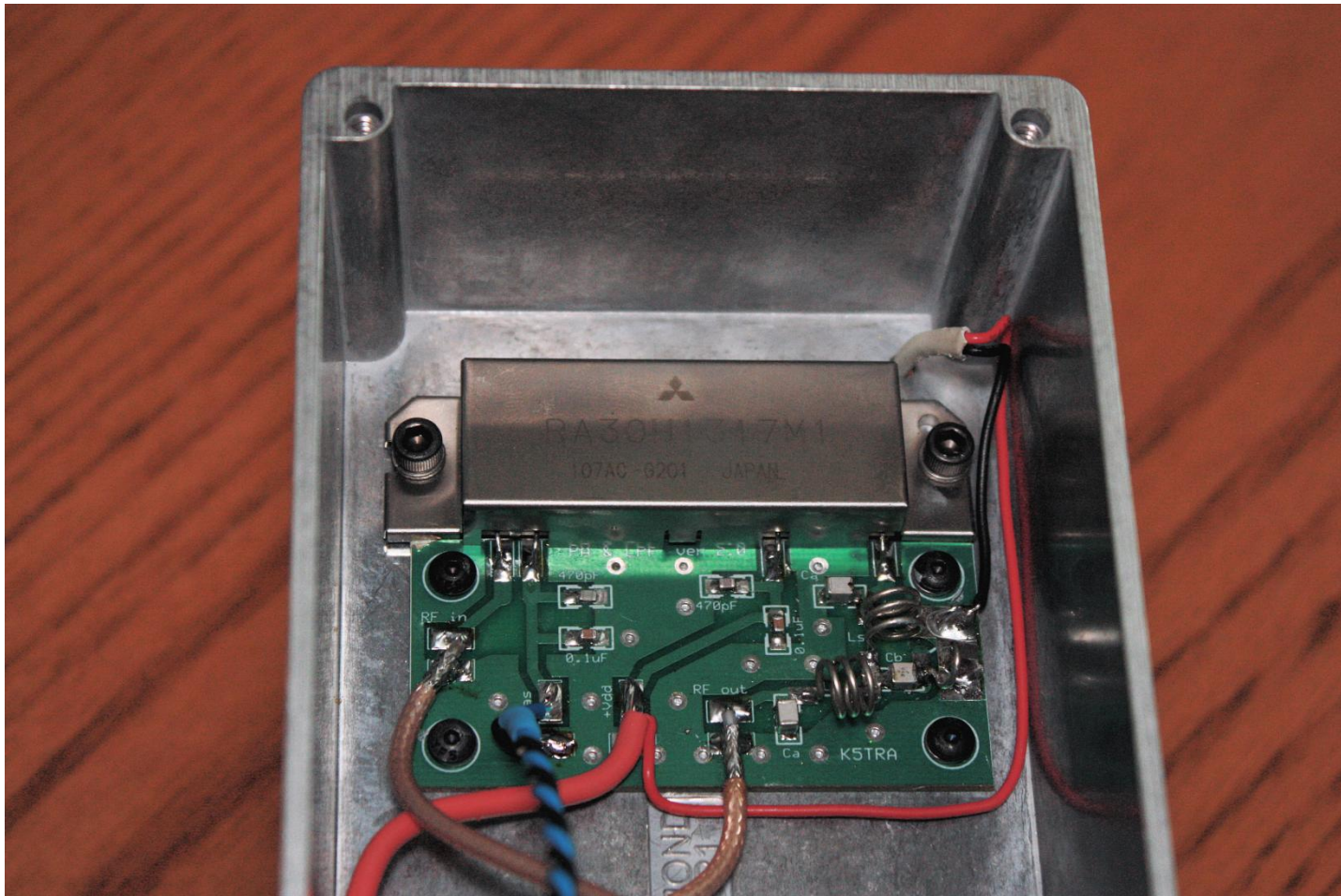
Beacon RF Board Schematic



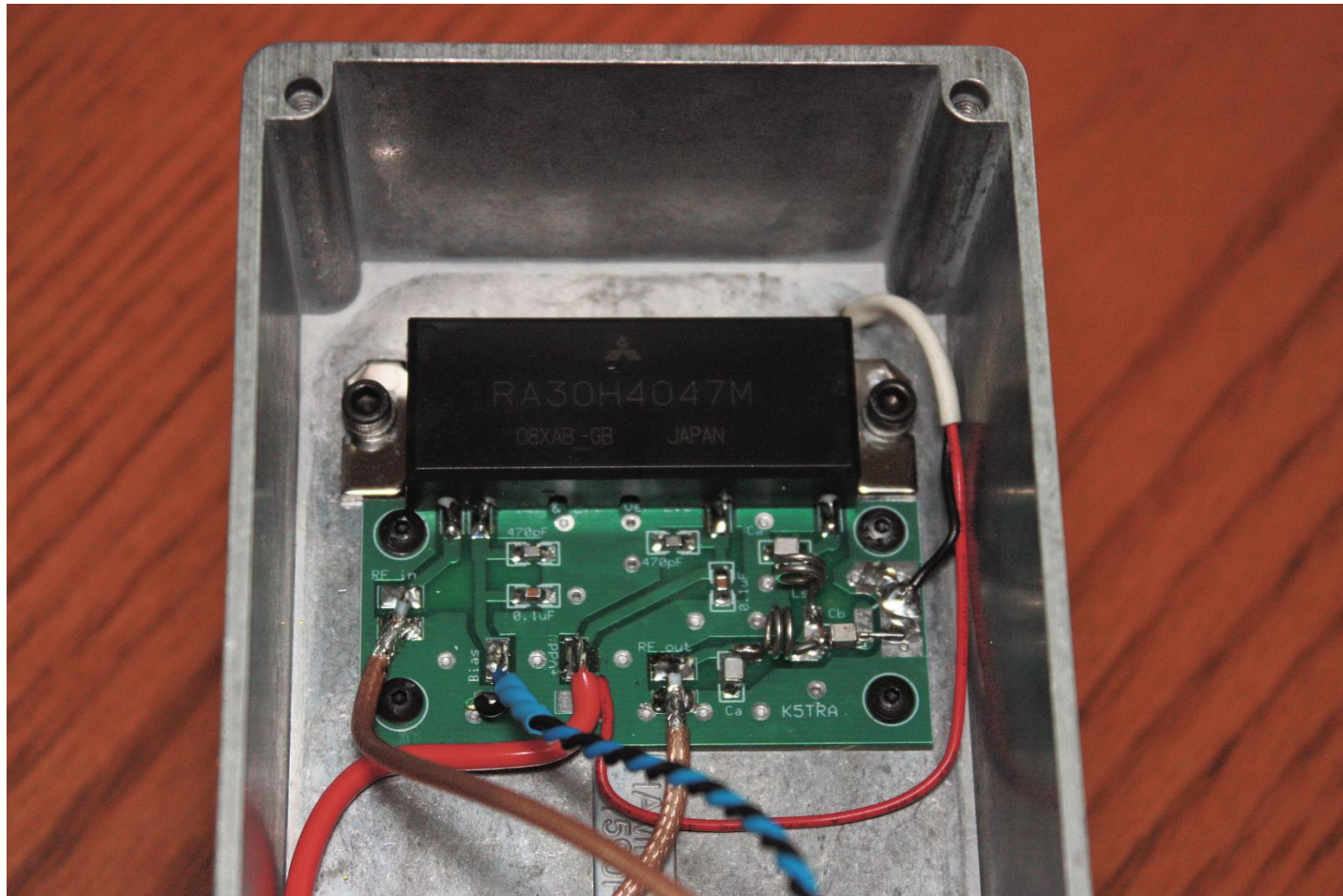
Beacon PA and LPF Assembly



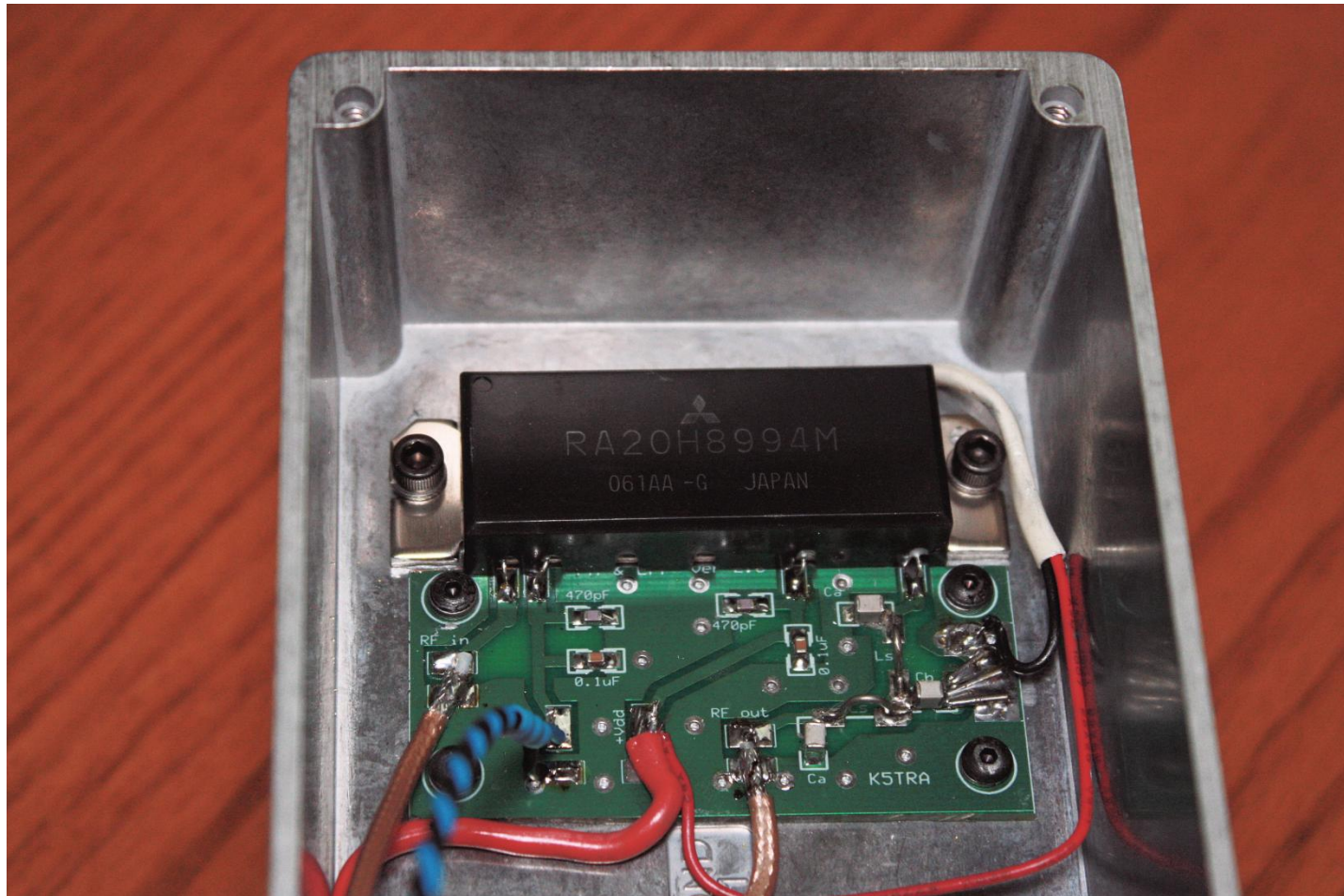
144 MHz Beacon PA and LPF



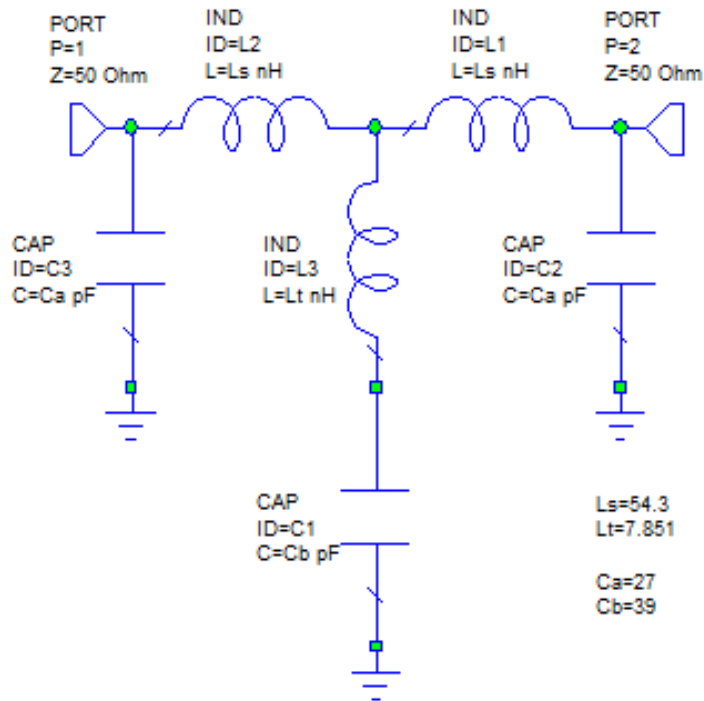
432 MHz Beacon PA and LPF



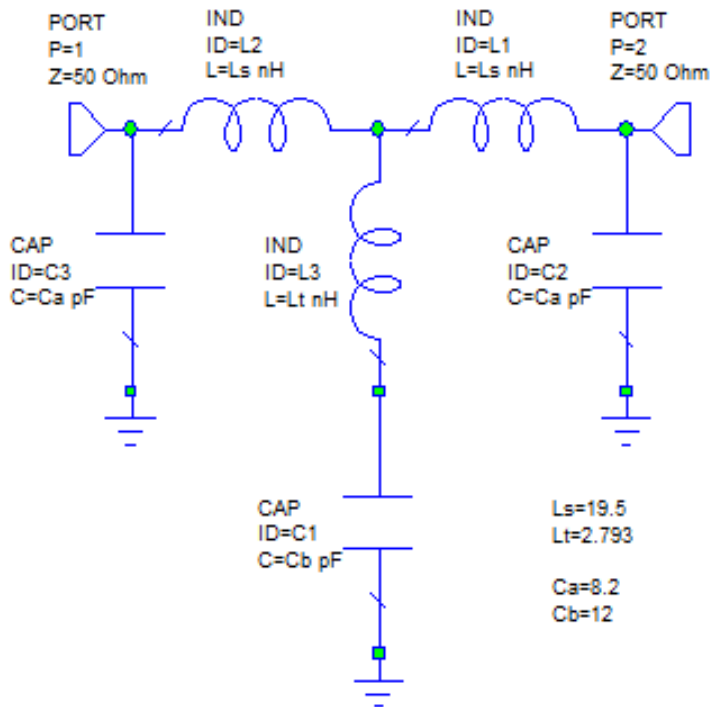
902 MHz Beacon PA and LPF



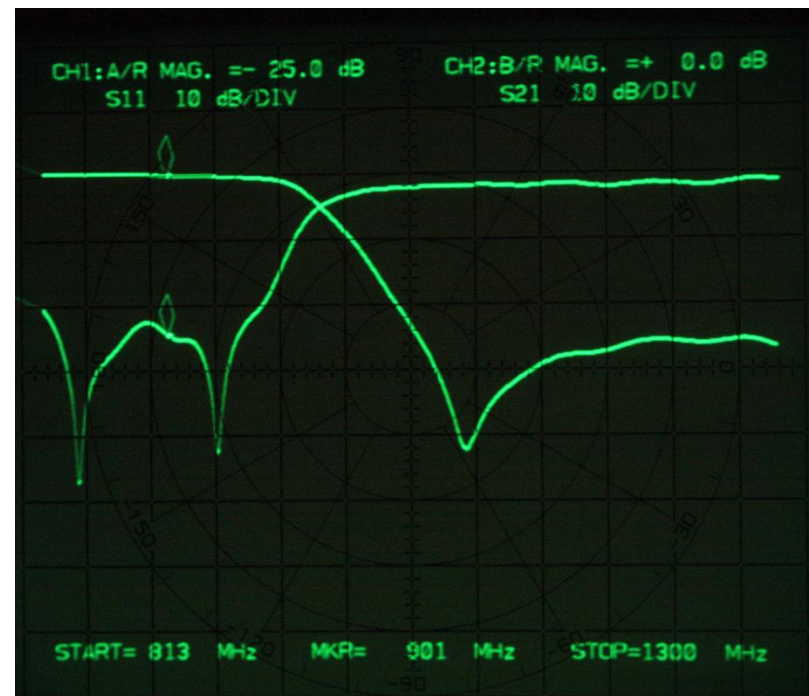
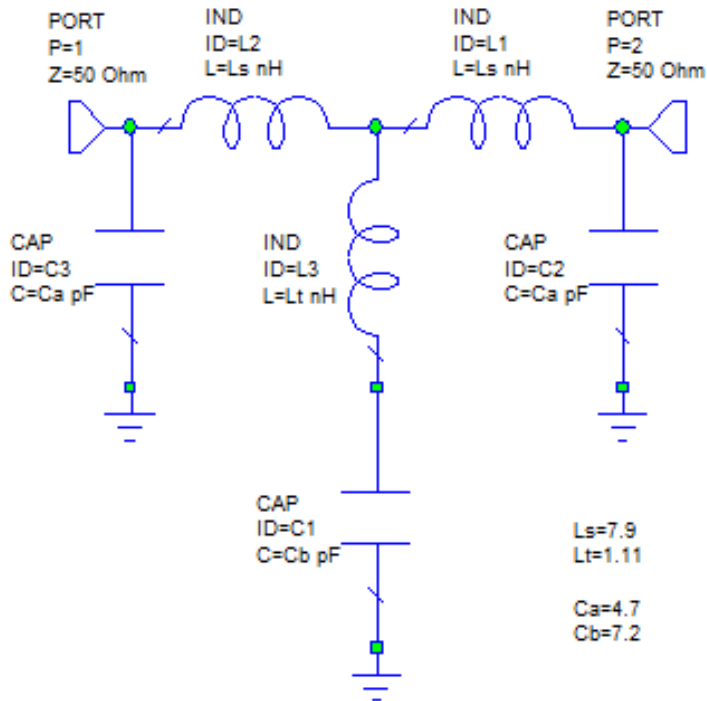
144 MHz Filter



432 MHz Filter



902 MHz Filter



Antennas

- 144.295 MHz
 - Par Omniangle
 - In place on the tower
- 432.345 MHz
 - Folded dipole big-wheel (K5VH design)
 - In place on the tower
- 902.330 MHz
 - Helical collinear (K5TRA design)
 - To be constructed by WA6UFQ

Credits

- RF board surface mount assembly
 - 144.295 MHz, Tom / K5TRA
 - 432.345 MHz, Bob / WA6UFQ
 - 902.330 MHz, Ben / NO5K
- FB-1 controller assembly
 - Dick / K5AND
 - Ray / W5IFS
 - Mike / WQ5C
- FB-1 programming
 - Bob / WA6UFQ
- Housing drill & tap
 - Dick / K5AND
- LPF construction, beacon assembly and test
 - Tom / K5TRA

Summary

- Three new RMG beacons:
 - 144.295 MHz, 10 W, Omniangle (PAR Electronics)
 - 432.345 MHz, 10 W, folded dipole big-wheel (K5VH)
 - 902.330 MHz, 10 W, helical collinear (K5TRA)
- Common RF and control board design
- PA interface boards with harmonic filters
- Mitsubishi PA modules
- K5AND – RMG beacon site
- Group project - shared construction tasks
- Thanks to K5AND for financial support of this project