

## UR5LCV'S YAGI FOR HAMS

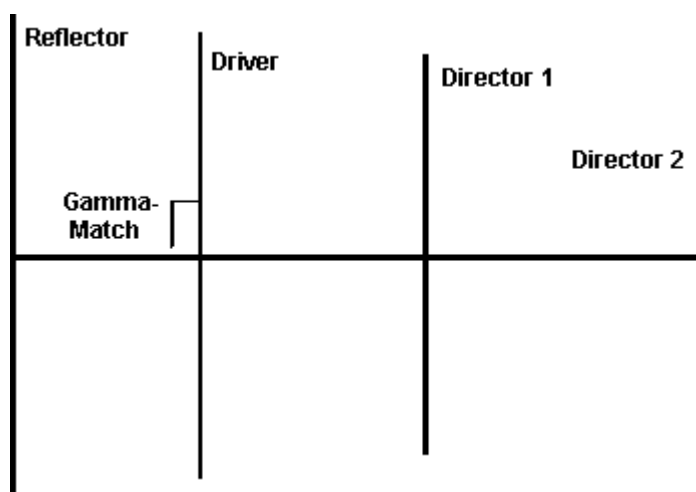
Antennas from here were designed and optimized by Igor Zel'din, UR5LCV, and design of the antennas were wrote in the book: HF- Antennas- 3, by I. Beketov, UR4LTX, I. Zel'din, UR5LCV, Kharkov, 1994.

10 years has gone from the publishing of the book, for this time lots of these antennas became well-known to hams of the CIS. Lots of these antennas are practically made and have shown full conformity to the theoretical parameters.

The antennas are designed for tubes of 25-mm diameter. If for tubes with different OD are used for elements of antennas do correcting of antenna sizes by modern Antenna Simulation Program. Input resistance of the antenna is much lower the 50 Ohms so it need to use a gamma match feed the antenna. You may calculate a gamma – match using programs given at Appendix to ARRL-Antenna Book, 19 or 20 Edition.

## UR5LCV'S YAGI FOR 28-MHZ

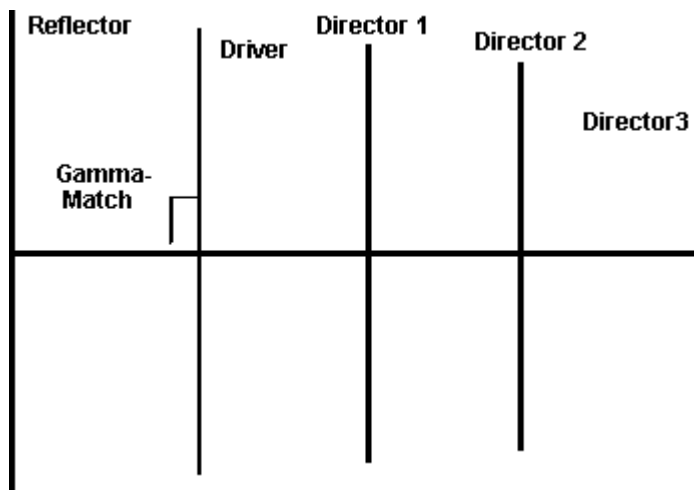
### 4-el YAGI for 28-MHz



F, MHz	28.0	28.35	28.7
G, dBd	7.16	7.49	7.87
F/B, dB	20.35	28.36	20.27
Z, Ohm	30.4-j7	26.4+j1.6	20.4+j.14.3
SWR	1:1.63	1:1.14	1:1.6

OD 25-mm	Reflector	Driver	Director 1	Director 2
Length, cm	535	503	479	448
Spacing to Reflector, cm	0	168	368	683

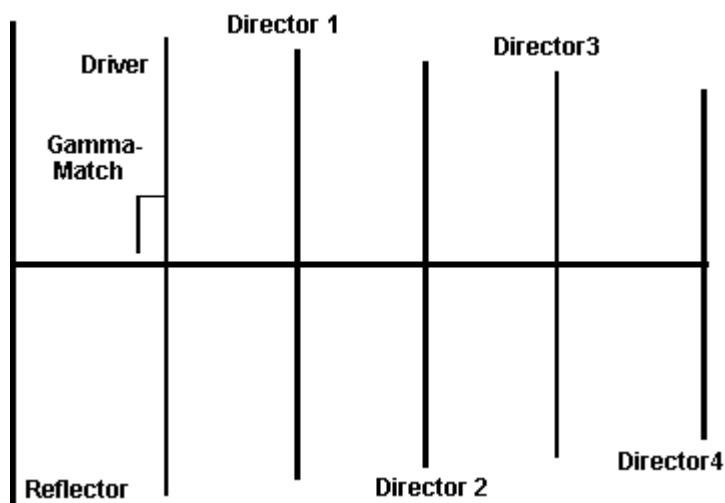
5-el YAGI for 28-MHz



F, MHz	28.0	28.35	28.7
G, dBd	8.17	8.41	8.46
F/B, dB	20.46	38.03	20.74
Z, Ohm	28.9-j9.8	29.5+j0.3	35+j2.9
SWR	1:1.3	1:1.09	1:1.29

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3
Length, cm	524	509	488	482	466
Spacing to Reflector, cm	0	149	253	478	736

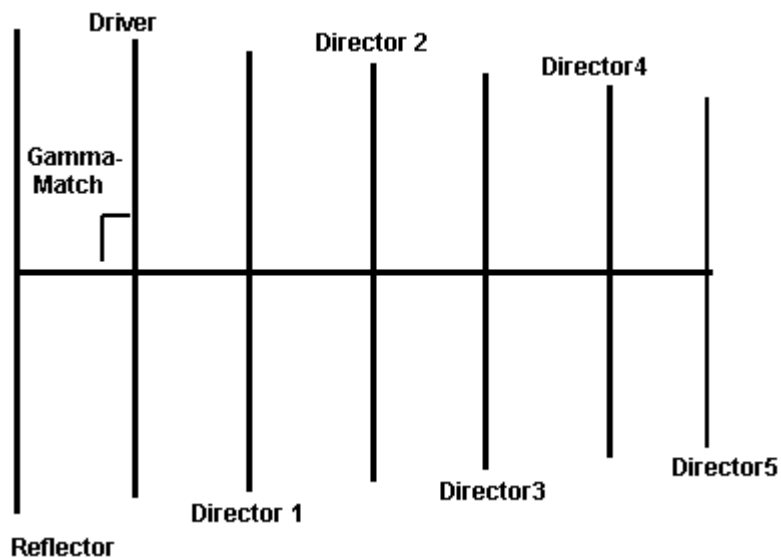
6-el YAGI for 28-MHz



F, MHz	28.0	28.35	28.7
G, dBd	9.39	9.62	9.49
F/B, dB	17.1	26.7	18.1
Z, Ohm	29.2-j8.8	24.6+j1	21.4+j21.7
SWR	1:1.95	1:1.3	1:1.94

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3	Director 4
Length, cm	530	502	481	480	477	464
Spacing to Reflector, cm	0	160	308	500	781	1084

7-el YAGI for 28-MHz

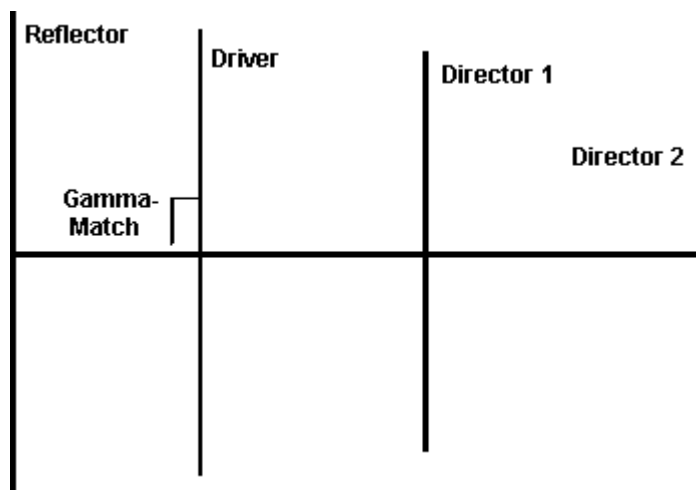


F, MHz	28.0	28.35	28.7
G, dBd	9.74	10.1	10.2
F/B, dB	20.48	23.75	18.15
Z, Ohm	30.2-11.1	30.6+j0.8	33.8+j10.9
SWR	1:1.48	1:1	1:1.39

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3	Director 4	Director 5
Length, cm	520	501	486	479	473	470	458
Spacing to Reflector, cm	0	205	348	541	779	1058	1343

**UR5LCV'S YAGI FOR 21 - MHz**

4-el YAGI for 21-MHz



F, MHz	21.0	21.175	21.35
G, dBd	6.88	7.03	7.16
F/B, dB	20.83	21.36	20.83
Z, Ohm	26.7-j3.8	23.3+j1.4	18.3+j8.6
SWR	1:1.4	1:1.09	1:1.4

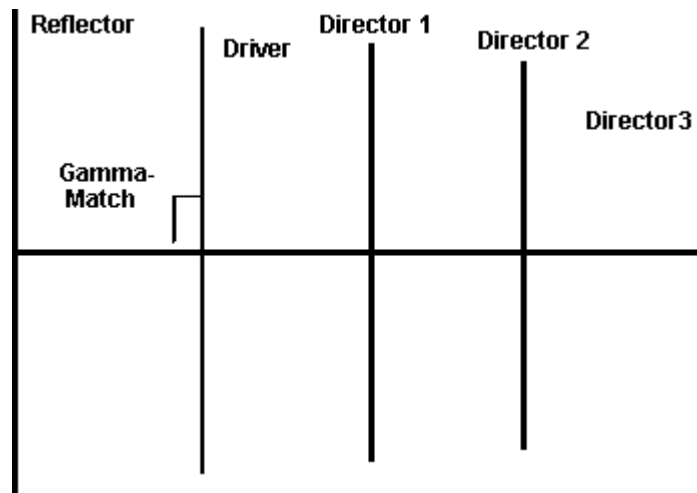
OD 25-mm	Reflector	Driver	Director 1	Director 2
Length, cm	722	684	658	614
Spacing to Reflector, cm	0	160	340	676

Another One 4-el YAGI for 21-MHz

F, MHz	21.0	21.175	21.35
G, dBd	7.74	8.0	8.26
F/B, dB	19.65	32.1	20.49
Z, Ohm	29-j58	24.2+j0.9	17.5+j10.6
SWR	1:1.53	1:1.15	1:1.54

OD 25-mm	Reflector	Driver	Director 1	Director 2
Length, cm	716	674	650	634
Spacing to Reflector, cm	0	210	516	880

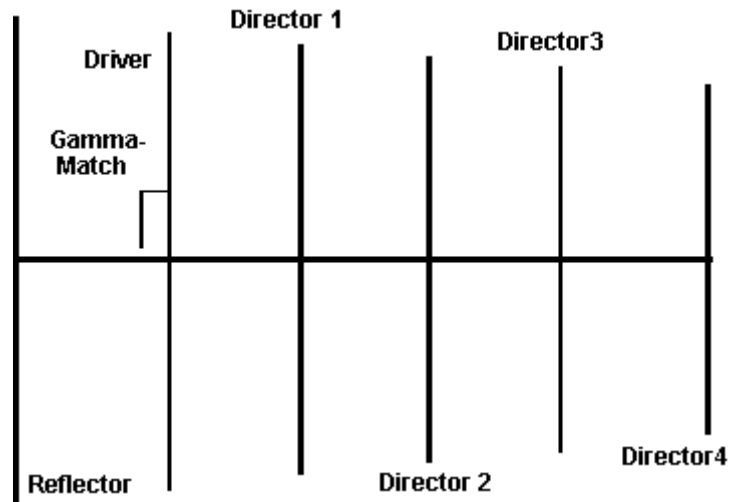
5-el YAGI for 21-MHz



F, MHz	21.0	21.175	21.35
G, dBd	8.19	8.39	8.54
F/B, dB	22.99	29.06	21.34
Z, Ohm	29.3-j8.8	29.3+j0.3	31.2+j11
SWR	1:1.39	1:1.02	1:1.4

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3
Length, cm	700	675	645	643	622
Spacing to Reflector, cm	0	234	388	657	1022

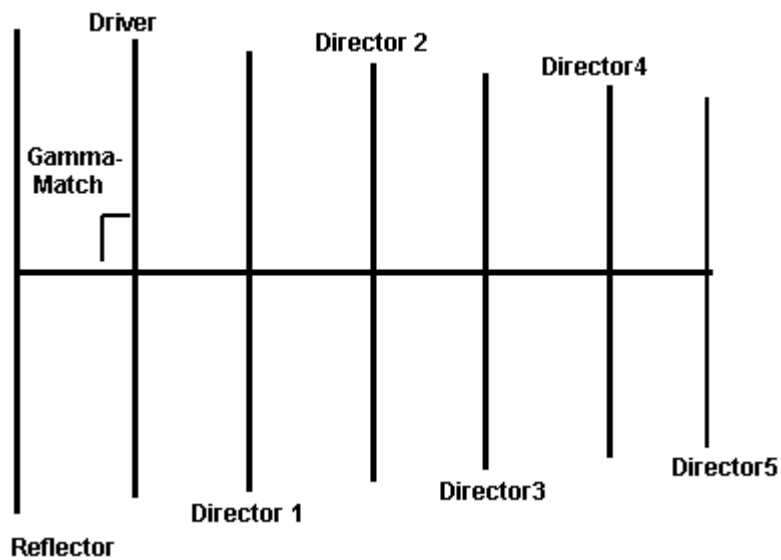
6-el YAGI for 21-MHz



F, MHz	21.0	21.175	21.35
G, dBd	9.46	9.63	9.62
F/B, dB	20.24	31.15	20.33
Z, Ohm	27.6-j8.3	23.8+j0.0	20.3+j13.7
SWR	1:1.65	1:1.16	1:1.64

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3	Director 4
Length, cm	713	673	647	645	643	625
Spacing to Reflector, cm	0	218	413	658	1045	1450

7-el YAGI for 21-MHz

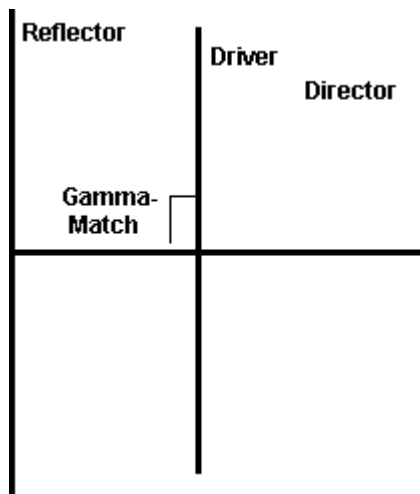


F, MHz	21.0	21.175	21.35
G, dBd	9.98	10.1	10.21
F/B, dB	23.61	24.14	20.00
Z, Ohm	29.5-j8.3	29.6+j0.1	30.7+j8.0
SWR	1:1.33	1:1	1:1.64

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3	Director 4	Director 5
Length, cm	695	674	649	638	630	626	607
Spacing to Reflector, cm	0	275	466	725	1043	1417	1798

## UR5LCV'S YAGI FOR 14-MHz

### 3-el YAGI for 14-MHz

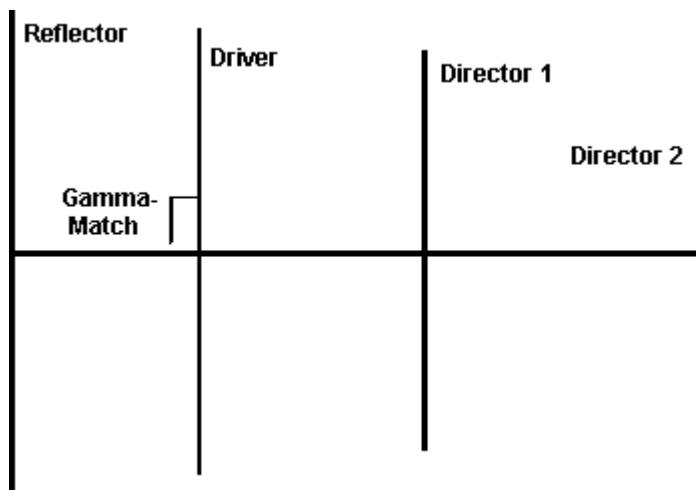


F, MHz	14.0	14.15	14.3
G, dBd	5.96	6.11	6.29
F/B, dB	19.07	25.43	18.44
Z, Ohm	22.4-j10.5	22.5+j0.3	21.3+j11.6
SWR	1:1.64	1:1.02	1:1.64

OD 25-mm	Reflector	Driver	Director 1
Length, cm	1054	1010	947
Spacing to Reflector, cm	0	282	696



4-el YAGI for 14-MHz



F, MHz	14.0	14.15	14.3
G, dBd	6.86	7.0	7.12
F/B, dB	18.02	20.13	18.93
Z, Ohm	22.2-j8.9	22.6+j0.3	20.2+j8.6
SWR	1:1.5	1:1.02	1:1.5

OD 25-mm	Reflector	Driver	Director 1	Director 2
Length, cm	1052	1018	982	920
Spacing to Reflector, cm	0	254	536	968

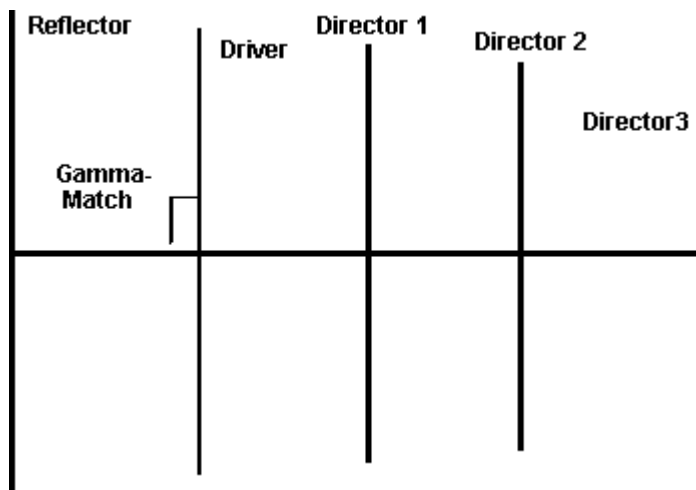
Another One 4-el YAGI for 14-MHz

F, MHz	14.0	14.15	14.3
G, dBd	7.5	7.84	8.24
F/B, dB	18.08	29.19	18.06
Z, Ohm	34.3-j5.9	28.3+j0.8	18.2+j14.3
SWR	1:1.68	1:1.26	1:1.67

OD 25-mm	Reflector	Driver	Director 1	Director 2
Length, cm	1079	1014	976	954
Spacing to Reflector, cm	0	326	771	1320



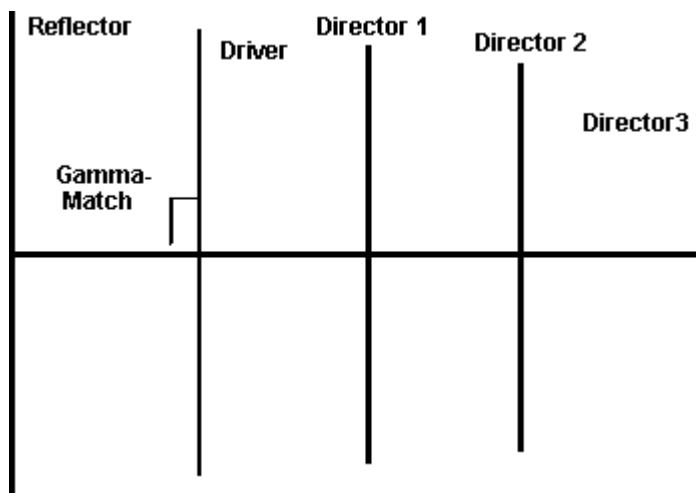
5-el YAGI for 14-MHz



F, MHz	14.0	14.15	14.3
G, dBd	8.23	8.53	8.77
F/B, dB	20.03	28.74	19.6
Z, Ohm	28.3-j9.4	25.7+j1.6	22.8+j14.4
SWR	1:1.61	1:1.07	1:1.67

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3
Length, cm	1046	1013	972	961	929
Spacing to Reflector, cm	0	372	746	1237	1694

6el YAGI for 14-MHz

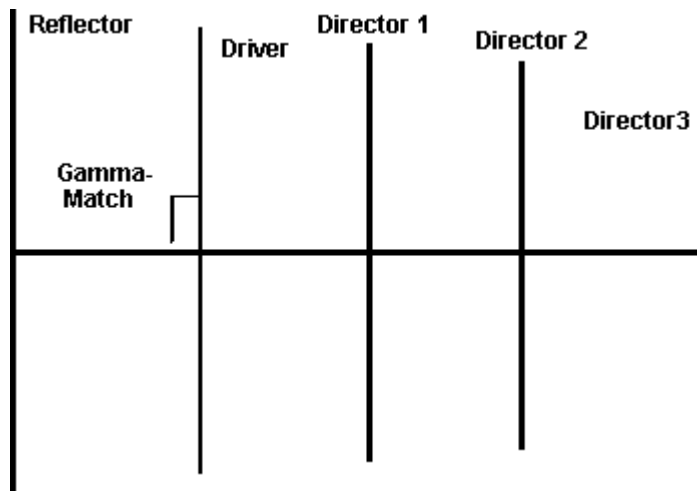


F, MHz	14.0	14.15	14.3
G, dBd	9.4	9.6	9.45
F/B, dB	17.46	26.31	18.1
Z, Ohm	32.9-j8.7	27.2+j0.3	23.3+j22
SWR	1:1.85	1:1.32	1:1.8



OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3	Director 4
Length, cm	1066	1016	979	973	971	952
Spacing to Reflector, cm	0	333	596	983	1574	2142

7el YAGI for 14-MHz



F, MHz	14.0	14.15	14.3
G, dBd	9.8	10.1	10.21
F/B, dB	22.07	24.03	19.01
Z, Ohm	31.2-j11.2	31.4+j0.1	33.3+j9.8
SWR	1:1.46	1:1	1:1.39

OD 25-mm	Reflector	Driver	Director 1	Director 2	Director 3	Director 4	Director 5
Length, cm	1044	1012	976	960	950	946	919
Spacing to Reflector, cm	0	413	697	1085	1561	2120	2690

**UR5LCV'S YAGI FOR 7-MHz**

3el YAGI for 14-MHz

F, MHz	7.0	7.05	7.1
G, dBd	6.12	6.3	6.5
F/B, dB	21.19	26.44	20.3
Z, Ohm	23.6-j7.7	22.2+j0.2	20.2+j8.8
SWR	1:1.46	1:1.03	1:1.46

OD 25-mm	Reflector	Driver	Director 1
Length, cm	2100	2037	1934
Spacing to Reflector, cm	0	675	1435